

A Look At The DURATRAX GT-10



ROAR TRUCK NATIONALS

WORLD



Desert Thunder

stability you don't feel with smaller scales. Blasting through backyard grass or coming out of a racing turn, there are no flip-overs. It remains highly stable, glued to the track. Fly out of a jump and our well balanced design lets your machine land so its ready to go on impact. And with its wide choice of gears, including an 18 tooth pinion, Desert Thunder is explosive off the line, and that's right out of the box. Standard too is 4-wheel independent suspension with 4-oil-filled, aluminum shocks. Each shock has three different pistons and adjustable coil over springs for adjusting the pre-load, compression and rebound dampening.

Add to this, World Scale's options, and you've a never-before-available-capability to match speed and performance to road and track conditions. World Scale, it's not just bigger, but handles better than anything you've ever driven. See World Scale at your hobby dealer. If he can't help you, call us for a dealer near you. World Scale Hotline: (908) 248-0730.

**...suddenly
everything else
is just a toy.**

MRC **WORLD**
OFF-ROAD *Scale*™

EX•Tech

Modified
Motors
For the
Next
Century

We developed this experimental, modified motor technology strictly for Team Trinity racing. Now that technology is available to let you run like a member of the team.

*This is Radical New Technology
Unlike Any You've Seen Before*

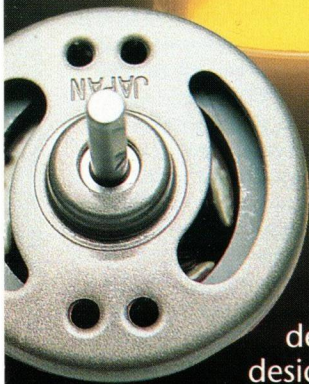
End Bell Cooling Ducts

Cooling vents are cast into the endbell and heat sinks to cool comm and brushes. The hoods are tighter to hold brush alignment better.



Motor Can Design

Aerodynamic end slots flow cooling air lengthwise and new motor can tooling aligns bearings precisely. The can designs are each custom designed to match the different winds.



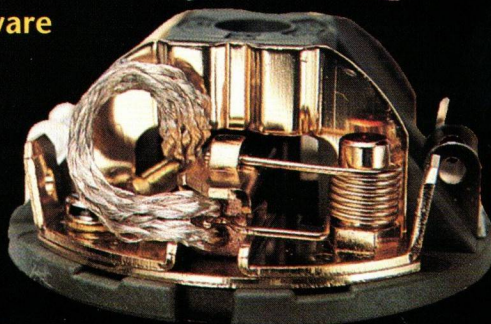
Armature is All New!

The armature is hand wound with all new Team tested winds on a new EX•Tech blank with machined points for more exact balancing. The comm is diamond trued for less brush bounce.



All Endbell Hardware is New!

The brush hood is indexed to the endbell for super precise alignment, when replacing brushes. Spring and shunt clearances are opened up for free movement and a new cap hook makes installing two capacitors easier. All hardware is removable.



Part No.	Name	Turns	Wind	Mtr Can
EX 0107	EX•07	7	Sgl	Full
EX 0108	EX•08	8	Sgl	Full
EX 3209	EX•09	9	Dbf	3-Hole
EX 3310	EX•10	10	Tri	3-Hole
EX 0211	EX•11	11	Dbf	Full
EX 0412	EX•12	12	Quad	Full
EX 3313	EX•13	13	Tri	3-Hole
EX 0114	EX•14	14	Sgl	Full
EX 3415	EX•15	15	Quad	3-Hole
EX 0216	EX•16	16	Dbf	Full
EX 3317	EX•17	17	Tri	3-Hole

\$85.00 at your local hobby dealer

TRINITY

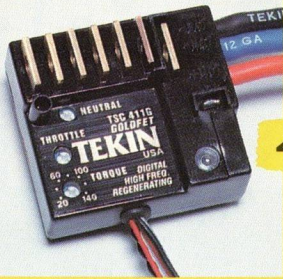
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411G

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IN THE MANUFACTURE OUR ENTIRE LINE OF COMPONENTS, WE SPECIFY AND USE ONLY THE FINEST IN MATERIALS, PARTS AND PROCESSES.

TER



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1.2" square, and only 0.4 oz. The Tekin TER Micro Receiver is much smaller and lighter than most stock receivers, and it works! TEKIN's own exclusive crystal I.F. filter makes this the best performing micro receiver on the market. Insist on it! Available for most AM radios 27 MHz to 75 MHz.

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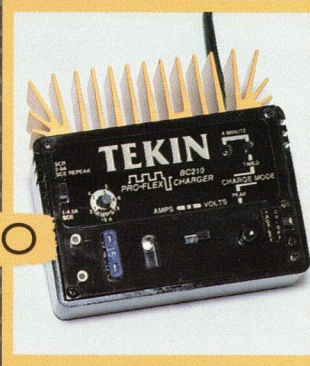


DYN900

THAT'S HOW WE DESIGN AND BUILD ALL OF OUR COMPONENTS, PROVIDING THE VERY BEST IN PERFORMANCE AND RELIABILITY.

IF YOU REALLY WANT WINNING PERFORMANCE, CHOOSE TEKIN. WE BRING THE TECHNOLOGY OF TOMORROW TO THE RACERS OF TODAY.

BC210

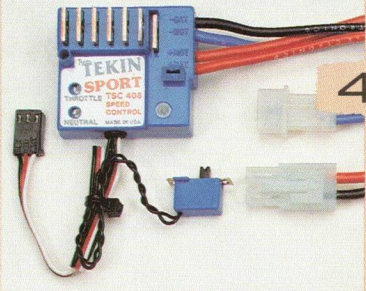


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Uses advanced negative pulse technique to chemically condition cells like nothing else can. The BC210 lowers the internal resistance of all nicad cells, which measurably increases voltage output under heavy amp load for more power. Restores most lost power and run time of tired, old packs. Keeps new packs running fresh. Increases power output, great for stock motors. Allows recharging the same pack all day, without the usual large power loss. Holder of many, many Top Titles.

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408s

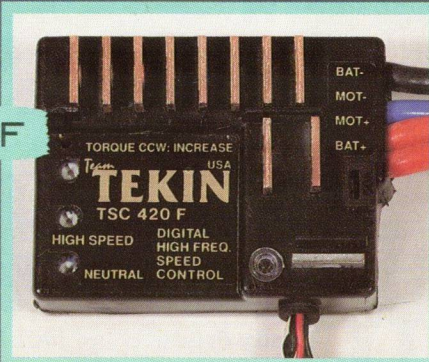
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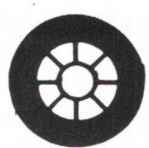


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Operates on 4 to 20 cells. High power for drag cars, insane runs, and twin motor trucks. Extra strong braking action. Hi-AMP B.E.C. powers 4WS truck and boosted amp servos.



COMPETITION



PLUS.

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**THIS MONTH IN RACING
1/8 Scale Sprint Car Nationals**

**ROAR Region 5 1/10 & 1/12
Paved Oval Champs**

JG Dirt Oval Champs

ABOUT THE COVER

This month's cover features the IFMAR 2WD World Champion Brian Kinwald driving an Associated/Reedy combination. Also featured is second Place Joel Johnson (Trinity/Losi) and third place Craig Drescher from England (Associated/Reedy).

MAILBOX

THE THREE A MAIN SYSTEM REVISITED

More and more now we are seeing large competitions using the three A Main system. ROAR's recent survey had a significant number of racers voting to adopt this format. I think this issue needs some re-thinking.

The argument for the three A main format is that it removes some of the luck involved in winning an A main. It increases the probability that the best drivers will win. One bad luck race will not necessarily result in the best driver losing.

I feel that there are several significant drawbacks to a three

mate could place better.

5) It is also possible (and quite probable) that three different people could win the three A mains. It then comes down to how those three people did in their second-best race. Is this what we want? The championship being decided by a racers second best race? Also it is possible for a racer to "win" the A main without winning any of the three mains. A racer who came second in each main could win the event if a different racer won each of the three mains. Do we want this to happen? I realize that this is an unlikely occurrence, but probability statistics tell us "give it enough chances and it will happen".

6) The three A main format is essentially another three rounds of qualifying where only your good rounds count and the bad one is thrown out. Why do we need more qualifying? We have already gone through three (at least) rounds of qualifying before the mains. The mains should be "do or die" time. there's always next time if you don't do it this time. Imagine the last place qualifier for the A main pulling off an upset and coming through to win the A main. What are the odds of him doing this two times out of three? The three A main format favors the top qualifiers and tends to take away the possibility of an upset. Upsets are the essence of sport. How interesting are any sporting events where the favorite always wins? Let's give the underdog a chance too.

7) This issue also needs to be looked at from the perspective of the spectators. Many spectators are totally confused in the final races of the three A main format. Why is the second place car not attempting to pass the leader? Because he doesn't have to in order to win the event! This makes no sense in any real racing situation.

Let's re-examine this issue and bring the excitement and realism of a single A main back to our sport.

Roger Brown

What do you think about pit stop racing?

-Ed.

CLEANING YOUR MOTOR

Dear Competition Plus:

How about an article on Cleaning a Stock Motor? How often and to what extent? I use a motor bath the day before and some "Blast Off" on race day, but I never pull the brushes on race day.

Sincerely,
PAUL WOOD
Vacaville, CA

Jeff Palmer is giving the 5 Step method to motor cleaning.

- Ed.

Cleaning a motor is simple and it doesn't make a difference whether it's a stock or modified motor. There are 5 basic steps. I too like the motor bath approach to cleaning so I use Bel-Ray's Motor Bath. The 5 steps to motor cleaning

A main format.

1) I agree that much of the luck is removed in winning the event if a three A Main format is used. However, I do not agree that this is necessarily better. I like to think that the underdog has a chance to win if he gets the breaks in the final race. The three A Main format pretty much eliminates that possibility.

2) The three A main format does not simulate "real" (full scale) racing. In full scale racing, you get one shot at winning. If you blow it or get unlucky, you wait till next time. That's racing. Roberto Guerrero, pole sitter at last years Indy 500, did not have two more chances after he spun out and crashed on the pace lap. I can't think of any full scale racing where a multiple A main format is used (with the possible exception of match racing in drag-racing which is more a demonstration/exhibit than a competition).

3) Generally, races are arranged so that the fastest mains go last. This ensures that the racing gets better and tighter and more entertaining as the mains progress. This brings the event to a climax at the A main. Using a three A main format, the winner may be already determined before the final A main is run (e.g. Joel Johnson's 1/10 World's On-road win). The final A main is then anticlimatic.

4) Team driving and blocking are much more likely in the three A main format where, in the last main many drivers no longer have a chance to win. However, a hit or a block in the first few corners in traffic (where hits are less noticeable or blamable on anyone) might ensure that a buddy or team-

are:

STEP 1: Hook up your motor, modified or stock, to a low voltage power source; something between 2.5-4 volts. Whether you're spraying the motor or dipping it in a motor bath, the spinning of the armature helps to clean the motor thoroughly. The cleaning process is dependent on the clean fluid reaching every part of the motor so it can flush or dissolve any built up lubricants, dirt, or carbon. I use the bath because it lasts longer and is less messy. If you're using the bath, dip the motor completely for about 10 seconds and then remove. If you're using the motor spray, flush the motor until all the visible dirt is removed or until the spray exits the motor clean. Don't forget to spray and clean the bushings/bearings.

STEP 2: Remove the brushes. When you remove the brushes, note if the brush braid is at the top or the bottom of the brush, in the case of double braid, mark the top side of the brush. Set the springs aside where these specific springs can be found. **DO NOT** place them in a box of other brush springs. Use the EDGE "Blue" comm stick and clean the commutator. Start by placing a small wheel or gear on the shaft to help you with this process; the small wheel I use will be available from Bel-Ray this fall. Place the comm portion of the cleaning stick, the square portion, into the brush hood and press firmly on the back of the comm stick, forcing the cleaning portion of the stick up against the commutator. Turn the armature about 10 full turns in the **COUNTER CLOCKWISE** direction; this is the direction the motor normally turns. **DO NOT** use a Dremel or other motorized tool to turn the comm, this may harm the motor. Check the comm, if there is still a carbon build up, repeat this step.

STEP 3: Clean and inspect the brushes. Start by checking the brush connection. If you soldered your brushes, check the solder connection. Make sure it's a good solder joint and not a "cold" solder joint. Make sure it hasn't been pulled away or knocked loose. If you attach the brush braid with screws, make sure the screw holding the braid to the brush hood is tight.

Inspect your brushes. Make sure the brushes haven't been chipped or deeply scored. If the brush is deeply scored, the comm is probably scored. For a modified motor, this means you may want to have your comm trued. For a stock motor, you will need to repeat STEP 2 and try to smooth the comm. In either case, replace the brushes. If your brushes look good, clean them using the round portion of the EDGE comm stick. You don't "file" the brush face with a back and forth motion, roll the comm stick along the brush face as if the comm stick were a commutator. This motion helps to work the dirt out of the grooves in the brush surface. Once the carbon build up is removed, use the flat portion of the comm stick to "file" away the sharp edges of the brush face. Beveling this area will help to prevent future chipping and possible damage. By removing this edge you will eliminate a lot of arcing, micro glitching, and radio interference. Don't remove a lot of this edge, just so it's no longer sharp.

STEP 4: Reassembly of brushes. Contrary to popular

belief, the carbon in the brushes is a conductor not a lubricant. When carbon and copper or other soft metal are combined, they form a good conducting surface with the commutator plates. When I get ready to reassemble the motor. I place a small drop of Bel-Ray Synthetic Bearing and Bushing Lubricant on the face of the brush. This will lubricate the surfaces between the brushes and the commutator plates but because it's a synthetic oil, it will not short or cause carbon build up. Petroleum based lubricants cannot be used this way. I have observed that by adding the synthetic lubricant a reduced amp draw due to less friction results. When placing the brushes back into the brush hood, replace them the same way they came out, that is, if the brush braid was at the top replace it that way. In the case of double braid, check for the mark from STEP 2. This is the way the brushes were broken-in/seated, originally. We all know to get the best performance from a motor, you have to seat the brushes, well, if you reverse the brushes, you need to re-seat the brushes.

Use the original springs. Normally, each of the two springs are of the same tension and ideally, the tension of the brushes on the commutator will cause the armature shaft to float between the bushings/bearings.

STEP 5: Lubricate the bushings and bearings. In STEP 1, the motor was thoroughly cleaned and most likely the lubricant in the bushings and bearings was removed. Before racing this motor again, the lubricant must be replaced. I place a drop of Bel-Ray's Synthetic Bearing and Bushing Lubricant on them.

CONCLUSION

I would like to thank Howard Rosen and Jeff Pack for the above information. "Til next time, **GOOD RACING!**

JEFF PALMER

NORRCA RUMOR HOLDS NO WATER

J. R. Sitman, President of NORRCA, has just sent us a fax denying the rumor that has been circulating for the last 8 weeks that a major manufacturer has purchased NORRCA. There is another rumor that NORRCA is **FOR SALE**. Neither of the rumors have any foundation according to J. R. Sitman.

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FINISH THE LAP YOU'RE ON

It's not often that I think an opinion written in this column needs to be changed. This isn't because I'm so insightful, intelligent or for any other great philosophic reason. It's simply because I often write about the obvious. I can easily see the difference between good and bad, square and round or any other extreme.

A while ago, in fact I think I wrote about this topic a few times, I took a strong stand against pay racing. I illustrated several reasons why pay racing would be detrimental to our sport. Some of them included higher race entry fees to cover the prize money, reduced attendance by drivers and possible poor sportsmanship when it came down to driving. In addition to these problems, allegations of team driving and pot splitting would be the order of the day.

Yet, at a pay race that I recently attended, I must say that at least some of my concerns may have been put to rest. The race was the MRC/Trinity Dash For Cash held at the Ranch Pit Shop in Pomona, California. The race was being held for MRC's new World Scale class, the largest electric powered vehicles around today. The turn-out was a bit light, yet many of the top off-road drivers around came out to compete for the very generous pot offered by the sponsors. In this case the prize money was put up by sponsors trying to launch a new scale of racing. This meant that the cash prize pool did not have to come from the entry fees itself.

That in itself was an answer to one of my concerns, but how about the driving? Was there any take-outs? Absolutely not. In fact, I will say that the driving was about as clean as I'd ever seen.

Okay, it was the first race and maybe that's why the driving was so clean. It just may be, however, that a good race director and race officials can keep racing clean. The Ranch always runs a great race and their reputation for running great races is known around the world.

I must state here that I'm not ready to see pay racing take over at all levels. In fact, I'd like to see a few more races with pay-offs equal to this event's (the winners took home as much as \$2,000 for the final race) before I'm totally sold on pay racing. I was, however, surprised and pleased to see this pay event come off so smooth and efficient. Maybe there is a place in our sport for money events.

PETER BARANA, Editor

Slot Machine 2

The stock motor redefined

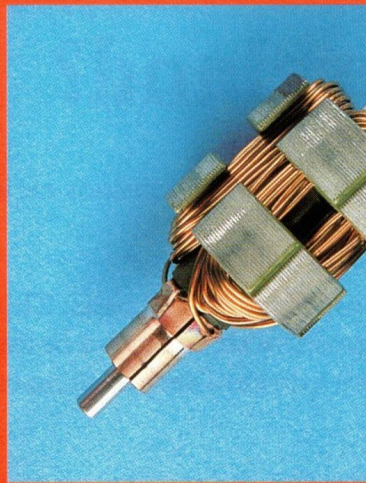
Closing the Gap BETWEEN Stock AND Modified



All endbell hardware is removable. Spring and shunt clearance is increased for free brush movement, while the hood-to-brush fit is more precise for better brush alignment and even wear.

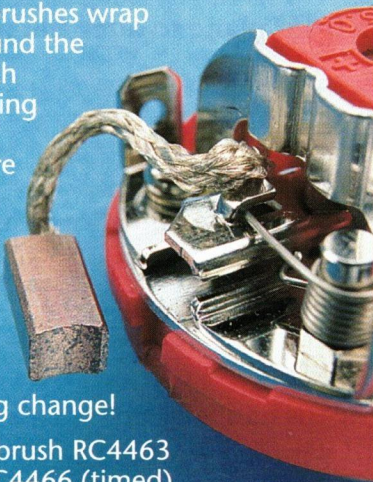


Can vents are louvers punched in so they scoop hot air out. By leaving the can metal intact, the magnetic field is unchanged which gives more low end punch.



The armature is hand wound on an all new, slotted blank with machined points to allow for more exact balancing. The locked comm is diamond trued for less brush bounce and the armature wire is 22 gauge, high temperature copper for fewer shorts.

Lay-down brushes wrap further around the comm which increases firing duration at the armature pole. This exclusive feature works great with timed brushes and gives more timing change!



Use Trinity brush RC4463 (hard) or RC4466 (timed)

Aerodynamic end slots flow cooling air lengthwise and bushing alignment is the most precise in racing.



EX-Tech technology makes the Slot Machine 2 a ROAR 91 stock motor that runs like a modified!

- 27 turns
- Locked comm
- 5.0 version wet magnets

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PIT BOARD

Do You Want To See Gold In Cleveland?

Just in time for the big change-over to 4 cell indoor racing are several new items from Team Trinity.

RE1025 "Revolver 1/12th Scale 4 Cell Chassis"

This is a custom designed 4 cell only graphite chassis. This chassis plate was designed to maximize the positioning of the cells for more positive steering and better grip when power is applied. The wheel base has a .325 shorter wheelbase which quickens response on carpet tracks. Easily fits the Revolver 12p or ss. \$49.99.

RE1026 "Orlando T Bar"

This is the same design T bar that Joel used to TQ and win the ROAR Nationals. It has two more tweak screw holes to stiffen the roll rate, while the T bar is cut on a 0-45° plane to alter the roll rate. Made of .060 glass. Easily fits Revolver 12p or ss. \$6.99.

RE0005 "1/12th Reactive Caster Front Suspension"

Trinity now has this great front end for the Associated 12L. Bolts right on and allows instant and precise adjustment of Caster, Camber, Toe out and Roll center. \$49.99.

RC6680 "Zip Grip"

All new super tire traction comes in dab on container, which keeps hands cleaner. This is the traction all the Pro racers secretly have in their cans. Based on the award winning Revtech Sauce. \$6.99.

RC1790 "4 Cell Championship Series Modified"

Due to the low voltages of 4 cell racing, special winds, cans, and armature blanks are what is required to truly be fast.

PIT BOARD

Trinity has asked Neil McCurdy, head of Trinity's engineering staff to come up with two modified motors like you will need to win in Cleveland this Thanksgiving. The first motor is based on our "Pink" Epic teardown and is already a proven winner. this motor is a 12 turn double and capable of producing generous amounts of low end power without being too hard on batteries. \$80.00

EX33513 "Ex-Tech 4 Cell Motor"

This 13 turn quint will especially work good on a nice long 4 cell track. Uses all the new Ex-Technology. The future is here right now!
\$85.00.

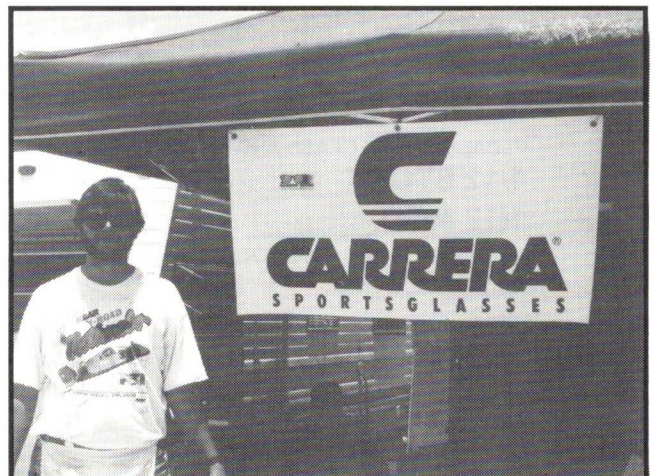
RC4525 "4 Cell Silver Brush"

Half cut silver copper compound. Single shunt so that ultra light springs can be used without fear of any hang-up.
\$3.99.

Trinity Products Inc., 1901 E. Linden Ave., #8, Linden, NJ 07036. Telephone: 908-862-1705 - FAX: 908-862-6875

Mallen Joins Rainbow Riders

Mr. John Mallen comes to the Rainbow Riders via GRAD of Air Force. Mr. Mallen specialized in Computer repair for aircrafts that was used in Desert Storm operations. John Mallen's expertise at computer software is instrumental to Rainbow Riders racing team. John Mallen was racing under Rainbow Riders performance even at the 1993 National On-Road Championship in Orlando, FL this past June. Rainbow Riders Quality Lenses Are the Winning Edge. Prescriptions Available . . . Performance Proven.
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PROUDLY PRESENTS THE

1993 REGION 1

1/12, 4-CELL

CARPET REGIONAL

Schedule:

Friday, December 10th
 Saturday, December 11th

Practice from 12:00noon to 9:00pm
 Stock Racing. 3 Qualifiers followed by Mains
 8:00am Doors open.
 8:00am to 10:30am Practice.
 8:00am to 9:30am FINAL Registration.
 10:30am Concourse (best paint) 1st-3rd.
 11:00am Racing Starts.
 Double A Main format, all others single main.
 Trophy presentation after all mains are complete
 A main trophies 1st-10th+TQ, all others 1st-3rd.
 Modified Racing. Same Schedule as above.
Warm-up Race, Stock and Modified.
 General Rules: No ODD Frequencies, Only Paragon FXII Traction Compound,
 GTP Bodies, R.O.A.R. Rules apply.

Sunday, December 12th
 Note: Sunday, November 14th

1993 R.O.A.R. REGION 1, 1/12 4-CELL REGISTRATION FORM

PLEASE PRINT CLEARLY!

NAME: _____ PHONE# _____
 ADDRESS: _____
 CITY: _____ STATE: _____ ZIP: _____ ROAR# _____

PLEASE CHECK CLASS AND LIST FREQUENCIES

1/12 STOCK _____ FREQUENCIES: 1ST _____ 2ND _____ 3RD _____ \$35.00
 1/12 MOD. _____ FREQUENCIES: 1ST _____ 2ND _____ 3RD _____ \$25.00

(R.O.A.R. Membership required. Membership available at track.)

Send Fee and Entry form to:

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PIT BOARD

The Juice Pack Is Here!

Model Rectifier Corporation announces The Juice Pack designed to deliver maximum performance in their new Thunder King, Desert Thunder and Baja King World Scale Off-Road racers.

World Scale trucks and buggies are vastly different from 1/10 scale and you would do well to think of modifications differently too. Instead of experimenting with an assortment of costly motors and gear ratios, we suggest you start by going right to the battery pack, right to the MRC Juice Pack, MRC's new 9.6 volt, 2,000 mAh, C-cell powerhouse that dramatically increases run times while delivering an amazing increase in raw power and off-the-line punch.

Traditional sub-C battery packs have a lot to offer the racing enthusiast for their size, but World Scale Off-Road racers don't fall prey to the restricting size and weight limitations of smaller vehicles, so there's no reason for World Scalers to limit their racers' capabilities to those smaller 1/10th scale power sources. There's ample room aboard a Thunder King, Baja King or Desert Thunder chassis to carry a battery pack . . . or even a Pair of battery packs . . . comprised entirely of big C-cells, whose many advantages to racers and back yard drivers alike can only be described as killer!

No modifications to motors, transmissions or gear ratios are necessary to get the MRC Juice Pack into a World Scale vehicle. A set of specially sized front and rear battery mounts are included with each Juice Pack. Just remove the original mounts, put the new ones in their place, plug it in and let the competition try to figure out what hit 'em!

For more info, see your favorite hobby dealer, or call MRC at 908-248-0730.

Genesis Introduces Horsepower With An Attitude

Genesis Racing Products, a new company born just this summer, now introduces a level of performance and customer service sought after by every racer. The team at Genesis is dedicated to providing the highest performance motors and cells available on the market today.

Backing up this effort is a combined 27 years of experience in motor manufacturing, computer cell matching and racing.

Genesis offers a full line of high-performance motors, cells, and accessories.

The team at Genesis looks forward to introducing you to Horsepower With An Attitude!



PIT BOARD

Team Specialized Takes Enduro Class

Specialized RC Motorworks dominated the Super Speedway Enduro Class at the 1993 NORRCA Paved Oval Nationals at Arkansas International Speedway in Pine Bluff, Arkansas. Bob "Bullet" Light was the only 81 lap qualifier in the field after four 10-minute runs which is just .1 of a second slower than the Factory 4-minute class. Bob chose Gary "Bigfoot" O'Brien, Guy "Eagle Eye" Maris, and Mark Wilson as his pit crew, and they did the job. Bob took the lead after just two laps and never looked back, finishing nine laps ahead of the competition after 400 laps. Bob used a 12 turn Triple World Series Specialized Motor. In the 4-minute races Gary "Bigfoot" O'Brien qualified 7th in the Factory Stock Class and finished 4th. Gary used the new Wicked Dude 40 Pro Stock Motor and Power Products batteries. Mike Manning was a solid A-Main qualifier in the Expert Modified Class and finished 4th. For more information on any of the equipment used or on any Specialized products please call (405) 947-1560.

Team Losi Drivers Join The Peak Performance/ Team Orion Racing Team

Peak Performance and Team Orion Matched Batteries are proud to welcome some of the most accomplished racers in the world to their racing team.

Among their many titles, Jack Johnson is a former ROAR National Champion and World Finalist and is the 1993 NORRCA 2WD National Champion; Scott Brown qualified second in 2WD at the 1993 Off-Road World Championships in England; Kyle Reed is a former ROAR National Champion and took third place at the 2WD World Championships in 1991, and Mike Weed is a talented newcomer from California who came in first at the 1993 West Coast Truck Championships.

Combined with an already stellar team including Rick Hohwart, Carlos Gonzales, Rick Vehlow and Scott Roberts, Peak Performance/Team Orion will field a formidable team in 1994.

PIT BOARD

RC10's WIN THEIR FOURTH IFMAR WORLD CHAMPIONSHIPS



The best racers in the world gathered in England for the IFMAR 1/10 Off-Road World Championships. All the major teams from Europe, the Far East and the USA were present with their latest cars. Team Associated raced their own RC10 Team Cars, with seven RC10's qualifying for the A Mains.

Brian Kinwald won two of the three A Mains and the World Championships in an incredible display of driving ability. His RC10 Team Car, with Reedy Modified motors and Reedy/Sanyo batteries, was the class of field. Following in 3rd place, with his RC10/Reedy car, was Craig Drescher from England. Craig is also the European Champion with his RC10/Reedy car. Masami Hirosaka, 4th, Matt Francis, 5th, Mark Pavidis, 7th, and Matt Ledger, 8th, all used RC10/Reedy cars, while Carlos Gonzales, 10th, used Peak Performance power in his RC10.

Team Associated's RC10 cars have now won the IFMAR World Championships an unprecedented 4 times!

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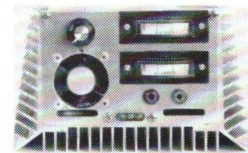
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PIT BOARD

Team BoLink Shines At The NORRCA Nats At Arkansas International Speedway!

The racers were driving the new LTO Pro (BL-1385). Top Qualifiers were Roy Powell in 1/10 Expert Modified, and Jeff Ball in Amateur Modified. Larry Bradshaw won 1/10 Amateur Modifieds. Bob "the Bullet" Light won the 400 Enduro - and the Halfway Challenge! Bob credited his motor man, John Lee, with his victory, and awarded John his Halfway Challenge trophy for his hard work. Tommy Rhea won 1/10 Expert Stock with an LTO SS chassis. In 1/12 scale, David Johnson reigned supreme by winning the 1/12 Expert Modifieds and going on to become 1/12 National Champion!

Over there, over there . . . on the 27th of June, Tanner's Hobbies got together with Westville Radio Electric Car Club and organized South Africa's FIRST enduro for 1/10 scale. Tanner's sponsored 2 BoLink Super Sports (BL-1369) topped with the Dodge Daytona IROC bodies (BL-2335), as "Team BoLink" for the 3 hour event. BoLink took both first (by seven laps) and second place in the race, first in time-qualifying trials, and first in concours! The reports say that both cars were basically stock (one had an independent front end), right out of the box. Talk about BoLink quality!

BoLink's Mickey Thompson stadium "Jimmy Nichols" will end up the series with two rides. In addition to his SUPER 1600 buggy Jimmy will drive a Truck owned by Ken Hodgson in the Grand national truck class. The truck formerly driven by stadium great Walker Evans is well prepared and Jimmy is looking forward to the last 3 races. We'll give you the results of the Las Vegas and Denver race in the next issue.

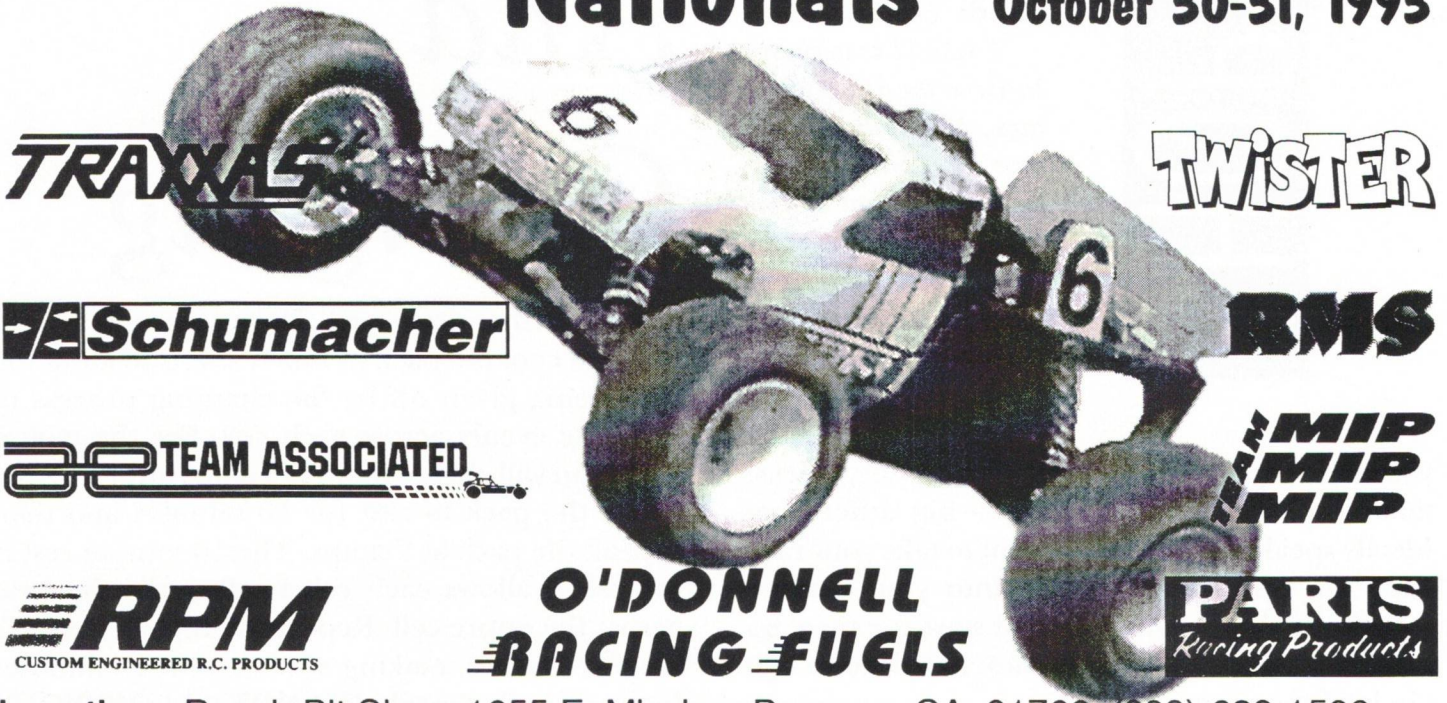
Alan Kotary Joins Class Recreational

Al comes from a large racing family which is well known in the Northeast. By blending his expertise as a well known full scale racing car builder and driver, Al can only bring new and exciting ideas to our sport.

Al's first priority at Team Class will be to expand our already great relationship with our dealers, distributors and most importantly our retail customers, the racer and hobbyist. His ultimate goal is to work as a team with all of you in making the RC industry and hobby the truly fun sport it is intended to be

KYOSHO**NORRCA****TEAM DURATRAX***Present the...*

1993 1/10th Gas Truck Nationals

October 30-31, 1993

Location: Ranch Pit Shop, 1655 E. Mission, Pomona, CA, 91766, (909)-623-1506
Oct. 29th-practice 11am-9pm. **Oct. 30th**-check-in and practice 7-8:30am. Driver's meeting 9:15am. The first of three qualifiers starts at 10am. **Oct 31st**-4th qualifier and mains. All "A" mains will be triple.

Host Hotel: Ramada Inn (909)-621-4831

Entry fee is \$45. Make checks payable and mail to NORRCA. NORRCA membership required, available through NORRCA or at the track. For a copy of the NORRCA '93 gas rules call (909)-981-9641 (you must be a member to receive the rules).

Racers will be allowed a one minute warm-up in the pits and one minute on the track.

This is a NORRCA sanctioned event. NORRCA membership is required.

For additional information call NORRCA at:

331 Mariposa Ct., Upland, CA 91786. (714) 981-9641.

NORRCA 1993 1/10th GAS TRUCK NATIONALS

Name _____ Phone _____ Norrca # _____
 Address _____ City _____ State _____ Zip _____
 Classes: .12 .15
 Frequencies: 1 _____ 2 _____ 3 _____ Amt. enclosed _____
 Sponsors _____

My dyno is on the fritz, which is really slowing up my development of the motor articles. While my dyno is being repaired, I thought I would take a little time out to answer a letter from Paul Wood of Vacaville, CA., who asked:

"I would like to charge batteries the day before a race. Not only does it save time, but it's easier to keep a record of how they took a charge. Some say it's better to charge them the day before and others say no. Any big difference?"

I'm glad to see that you are keeping records on your battery packs; that's important. Yes, there is a big difference. Ideally speaking, you would want to take your race pack off the charger, slip it into your car, go straight to the starting line and start the race. So much for ideal. Let's talk basics. NiCds have two kinds of memory:

- 1) How they were last charged
- 2) How they were discharged

How they were last charged - The assumption here is that you are using a "peak detection" charger like Tekin, Competition Electronics, Novak or one from a host of other manufacturers and that you have a fan. If you are not using a "peak detection" charger, then we need to spend some time discussing charging basics. The fan I use is from Radio Shack. Its one of the fans used to cool electronic equipment and it came with a wire guard or screen. Since I want to place my battery back on the fan for maximum cooling, I placed a 2" screw and nut in each of the four mounting holes so the fan can draw air from underneath the fan and blow it out on the battery pack that's

All About Batteries And Charging

resting on the wire guard. The purpose of the fan is not to cool the pack so much as it is to allow the heat being given off by the charging process to dissipate evenly across each cell. For the typical SCR, you will charge them at 5 amps until it peaks. Allow the pack to rest for 10 minutes and then repeak the pack at 7 amps. The 10 minute rest is critical, it allows each cell to dissipate the heat across the entire cell. Repeat the repeak step at 7 amps 2-3 times, making sure to wait 10 minutes between each repeak. **DO NOT ALLOW YOUR PACK TO TRICKLE CHARGE AT ANY TIME!!** The 5 amp charge is for capacity. The 7 amp charge is to satisfy the "last charged" memory requirement. This charge provides a slightly higher voltage that gives the racer that extra "punch" most of us like at the correctly charged. You can not simply warm a pack correctly by recharging it. Recharging does not bring into play the electrolyte contained in the cell used during the charging process. Most NiCd applications like tape recorders, camcorders, power tools and the like don't take advantage of this first memory type of a NiCd; it's fairly unique to R/C racing.

How they were last discharged - This has been a topic of conversation for years. The best rule of thumb I've gained in that time is:

“Discharge a pack as close to race conditions as possible!”

DO NOT TRICKLE (slow) DUMP YOUR PACKS. The high dollar packs that racers can buy from the Pack Shoppe or Team Smooth work so well because they are conditioned for a specific kind of racing. Jeff and Mike don't charge their cells that much differently than the way we do but they have spent a great amount of time learning how to condition(discharge) the pack for a specific type of racing; dirt oval, off-road, on-road, etc. This 2nd memory effect has to do with how the NiCd was discharged. It remembers:

- 1) If it was fully or partially discharged?
- 2) If it was discharged slowly or rapidly?

Armed with this information, it should be apparent that it is important to discharge a pack as quickly as possible after a race at a high amperage rate. I use 20 amps on my discharge unit. Remember, each time you use a pack, you are training the pack for its next race.

Question: “After a race, I discharge the batteries and clip on bull dogs. Some say you can leave them on

until the next race (two weeks), but others say it will drop the voltage. What is the truth?”

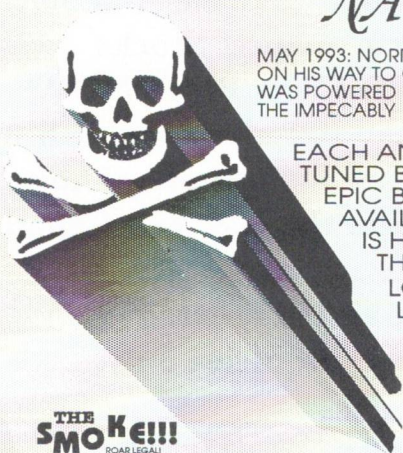
I'm glad to see that you are completely discharging your pack before using a low level discharge unit to drain your pack. My experience with the use of “battery bugs”, “bull dogs”, lights and other low amperage devices to equalize their packs has resulted in packs that have no “punch” at the end of a race. Packs don't remember time, say 4 minutes. They remember energy levels. At a specific level, they will recall the amount of energy they are required to put out. If the pack is conditioned to give off a low level of energy, then that's what you get. If, on the other hand, it recalls a high energy level, then that's what you get.

If what you want to do is “equalize” your cells, discharge each cell individually. The big time teams will clip on or solder a 5x resistor across each cell of a pack to “deep cycle”. The resistor stays on overnight and then it is removed. The pack is allowed to sit until the next race. It's that simple.

The devices I've seen to date that say they will “deep cycle” a pack have caused me several prob-

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MAY 1993: NORRCA DIRT OVAL NATIONALS: SEAN YOUNG REWRITES THE RECORD BOOKS ON HIS WAY TO CAPTURING THE TOP SPOT IN THE 4 W.D. MODIFIED CLASS. SEAN'S CAR WAS POWERED BY AN EXTREME MOTORSPORTS 13 DOUBLE AND "S-2" BRUSHES AS WELL AS THE IMPECCABLY MATCHED AND CYCLED WORLD CLASS BATTERIES TEAM SCRC'S.

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□ DEFINING THE EDGE □

SHOP TALK

lems. False peaks and cell reversal are the first two problems that come to mind. When a cell is completely discharged and it is in series with other cells, such as in a pack, the discharged cell will try to pass the energy from the other cells to the point where there is a load. In simple terms, if the cell is discharged, the other cells are actually trying to raise the charge in the discharged cell to make it a

better conductor but since this cell is completely discharged and is not conducting well, the other cells are charging the cell backwards. You get cell reversal and damage.

In those cases where the cell is only completely discharged, false peaks are often detected when a charge current is applied because the discharged cell is not conducting well and is sluggish to recover. If you choose to use such a device, "the better a pack is matched, the fewer the problems".

Question: "What is the proper way to check a battery pack for a bad cell? At what readings would you change that cell and what numbers do you need to match with a replacement cell?"

I wish there was an easy way to answer your questions. To begin with, the numbers you need to be concerned with are:

- 1) Capacity,
- 2) Voltage,
- 3) Internal resistance.

To answer the first part of your question, the only way to test if a cell has gone bad, is under a

load. In the first question of this article, you stated that you keep records on your packs, start here. If the pack has dropped off in performance, then you have reason to check the cells. Assuming you are using a pack that has been matched, each of the cells should have a label that gives you the above information. Rematch each of the cells and rebuild the pack.

Til Next Time . . . Good Racing!

JEFF PALMER

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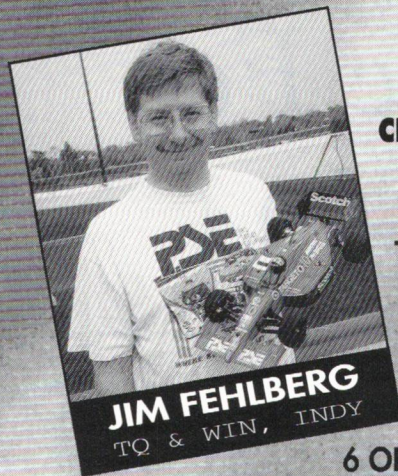
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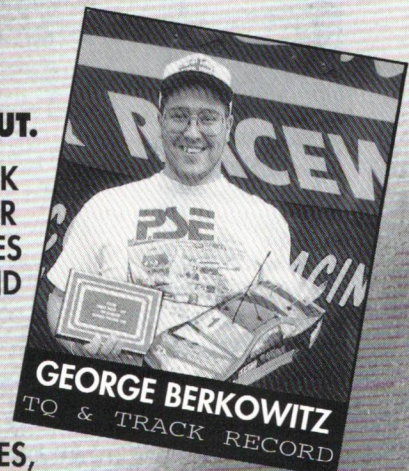
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1ST PLACE "A" MAIN PARMA/PSE!



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THIS 1,100 FT., 26° BANKED TRACK
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"300 ENTRANTS"

A MAIN MODIFIED:

6 OF 10 DRIVERS USED PSE PRO EAGLES,
PSE BODIES AND GEARS.

GEORGE BERKOWITZ: TQ AND NEW TRACK RECORD.



7 OF THE 10 A MAIN STOCK DRIVERS
USED PSE PRO EAGLES, BODIES AND GEARS.

A MAIN INDY CAR: JIM FEHLBERG, TQ AND WIN

A MAIN GEAR BOX MODIFIED: RANDY HODGE, TQ AND WIN



American Raceway in Freehold, New Jersey was the host for the first Point Blank race of the 1993-4 racing season. This event was for 1/10th and 1/12th stock and modified road racing cars. The turn out was not as good as expected due to some rain which washed out Saturday, and scared a lot away on Sunday. In any case, the racing turned out very good with good clean dices in all the classes.

It was interesting to see a road race as this area of the country has really had nothing but Super Speedway events for quite some time. Especially interesting was Jake Flurer, a member of Trinity's dirt oval team, racing for the first time on a road course, easily win both the stock and modified 1/10th scale A mains. Not bad for someone used to only going around in circles. Jake of course ran the Trinity Evolution 10 road racing car with a handout Point Blank motor in stock and one of the new 12 turn EX Series modified motors in the modified class. Jake used Team Pushed Sanyo SCRC-SP cells to power his car.

Stock A Main 1/12

- 1st - Mike Palmer - 34
- 2nd - Larry Wedemeyer - 32
- 3rd - Alex Kikel - 31
- 4th - Drew Goldberg - 30
- 5th - Victor Viola - 29
- 6th - David Migiola - 23
- 7th - Bruce Wolferz - 04
- 8th - Anthony Shalo - 01
- 9th - Chafic Kazoun - DNS
- 10th - John Wohnus - DNS

Stock A Main 1/10

- 1st - Jake Flurer - 19
- 2nd - Bruce Campbell - 19
- 3rd - Matt Wojtkowiak - 18
- 4th - Joshua Lewis - 17
- 5th - Rich Icker - 17

When You Got To Have More



The First Point Blank Race For 1993-94

- 6th - Mike Hanulec - 16
- 7th - John Fitzmaurice - 16

Modified A Main 1/12

- 1st - Mike Palmer - 36
- 2nd - Al Turner - 34
- 3rd - Drew Goldberg - 32
- 4th - Larry Wedemeyer - 26
- 5th - Mike Ibetherick - DNS

Modified A Main 1/10

- 1st - Jake Flurer - 19
- 2nd - Matt Wojtkowiak - 19
- 3rd - Bruce Campbell - 17
- 4th - Rich Icker - 08
- 5th - John Fitzmarurice - DNS

The Point Blank Series of races will continue with the rest of the events scheduled so far on high speed banked oval. The next event which will already have been run was at "Pro Challenge Raceway" in Lansdale, PA. We will have the results in the next Trinity corner. Following Pro Challenge we will be headed north once again to K&N Super Speedway. K&N will host our 3rd race October 30 & 31st. K&N is one of the most popular tracks around and has hosted the Pro Car nationals along with the Winter Blast/Spring Sizzler races which are the biggest in the north east. This will be a race you won't want to miss.

Trinity Staff

Tekin's new 610-G GoldFET reversing speed control should be ready about now. This is the most powerful reversing speed control ever, with about half the previous lowest on-resistance and heat. In fact it is the first and only reversing speed control to have the same power as a quality forward only speed control.

On a forward-only speed control (fig. 1) there is only one set of MOSFET transistors that switch on and off. One of the motor's wires, usually the red one, is connected directly to the battery pack. Only the black wire is switched on and off to provide throttle control, so there is voltage drop through one set of transistors only.

On a reversing speed control, connecting the motor wires to the battery backward is what causes the motor to run backward. To do this both the motor's wires must get switched. In figure 2 you will see that there are actually 4 sets of MOSFET switches. When driving forward, the red motor wire is switched to the red battery, through MS2 (MOSFET switch 2), and the black motor wire connects through MS4 (MOSFET switch 4) to the

TEKINews

Tekin's New 610-G

black battery.

This causes the motor to run forward. To go in reverse, MS2 and MS4 are switched off, and MS3 and 1 are turned on. This connects the red motor wire to the black battery, and the black motor wire to the red battery. Only 2 of the 4 MOSFET switches are ever turned on at the same time, and they must be the correct two. If you were to turn on MS1 and MS3 at the same time, for example, you would have a short circuit across the battery. All the extra switching is why it takes more and better MOSFETs on a reversing speed control to match a forward only type.

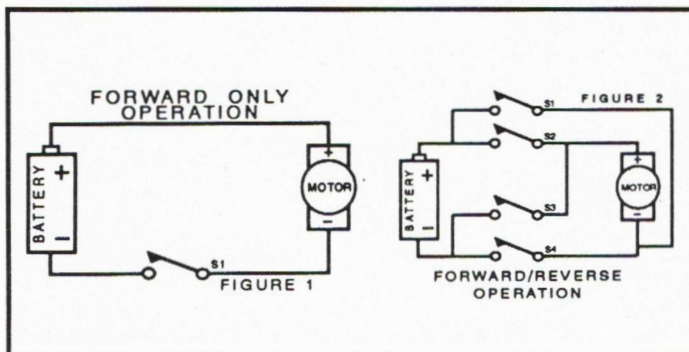
To get the 610-G's performance, we used a double row of super-low drop GoldFET transistors. This gives the speed control an overall forward voltage drop of .0019 ohms (then X 2 because there are actually two MOSFET banks on at once in a reversing control), or .0038 ohms total, about the same as our 410-S performance style forward only unit.

Of course, we wouldn't go to all this trouble without also including our new replaceable wire-terminal solder posts with massive 12 gauge wires for ultimate horsepower.

Some set-up tips: If you are going to be running in reverse a lot, put 0 degree castor blocks on your car for better steering control. Also, set the motor timing to neutral (0degrees) for longer brush and motor life.

Next month we'll take an in-depth look at drivers and driving.

Tekin Staff



1993 ROAR Truck Nationals

By Bill McCall

The 1993 ROAR Truck Nationals track in Grand Rapids.

This year was the fourth for the ROAR Truck Nationals. I have had the good fortune to attend three out of the four. The first was in Las Vegas in 1990. That was the year that Losi introduced the first truck kit, the JRXT. The Losi truck competed mostly against RC-10 conversions created by a handful of third party manufacturers. It was a successful start to what would become one of the most popular nationals with the '93 event running with over 400 entries.

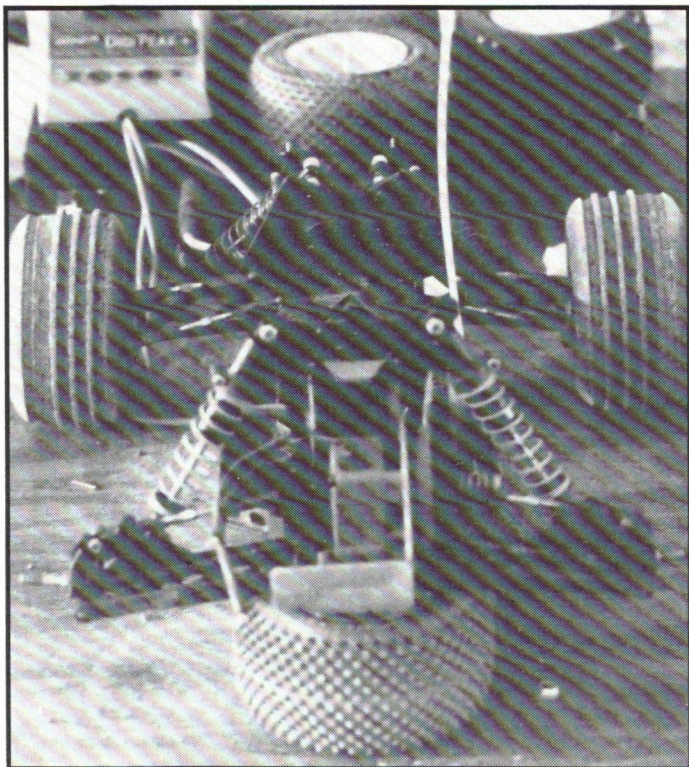
Team Losi won both classes that year with their revolutionary truck. The next year, Team Associated came out with their truck design and came into





Columbus, Ohio with high hopes of unseating Losi from the throne. They came close with several drivers in the A, including the TQ performance of Cliff Lett. But Team Losi came out of Columbus once again with both titles.

Things looked pretty much the same in '92 when the race moved to Savannah, Georgia as Losi driver Kyle Reed dominated stock and the early rounds of modified. Associated won its first truck



Stock's Top 10

- TQ - Jeremy Kortz
- 2nd - Rick Vehlow
- 3rd - Scott Hughes
- 4th - Jason Ruona
- 5th - Jack Johnson
- 6th - Matt Ledger
- 7th - Mike Dunn
- 8th - Scott Brown
- 9th - Scott Roberts
- 10th - Jon Anderson

title that year when Mark Pavidis won the modified title in the first year that ROAR used the three A main system.

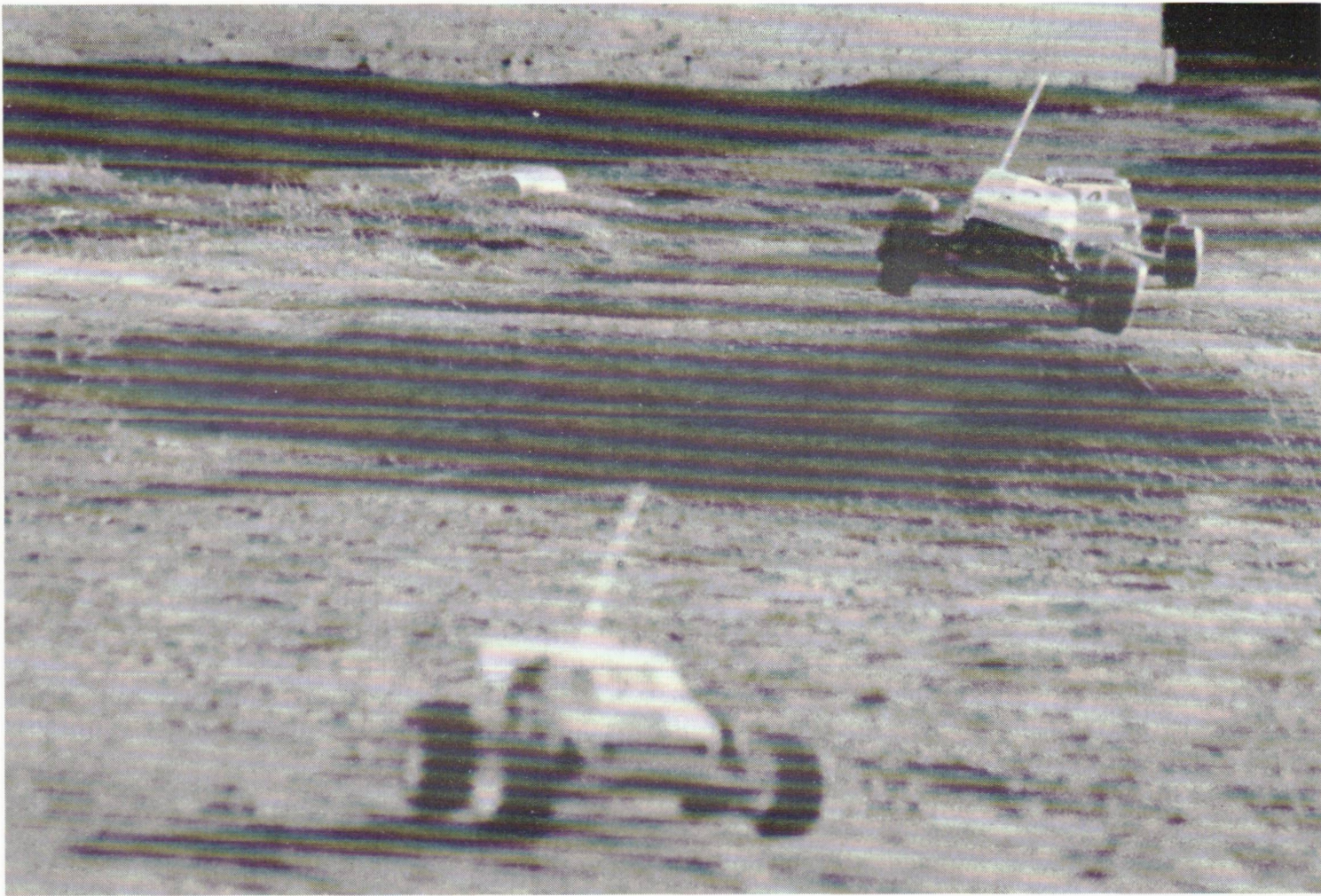
The RC-10T has pretty much remained the same as the truck that Cliff TQ'd with back in 1991. Since that first title, the Losi truck has undergone many major changes such as a new chassis, shocks, and recently a new transmission. Upstart Traxxas, which made a good showing in '92, sent a smaller team to this year's event in Grand Rapids, Michi-

Above: The staircase saw many lead changes.

Below: Speed, especially in the stock class often translates into victory. Many drivers like Jay Halsey trimmed the outside ribs in front to gain speed in the stock class.

Mod's Top 10

- TQ - Jeremy Kortz
- 2nd - Brian Kinwald
- 3rd - Mike Dunn
- 4th - Mark Pavidis
- 5th - Scott Hughes
- 6th - Rick Vehlow
- 7th - Matt Ledger
- 8th - Gil Losi
- 9th - Brian Dunbar
- 10th - Greg Hodap



gan.

This event was held by the Rivertown Racers of Grand Rapids. The club has hosted many events ranging from regionals to a World's event in 1/12 scale. I expected a smoothly run event, and for the most part that is exactly what we got. There were a few small glitches, as there are with any major event, but they were handled well.

My first impression of the track was that it was something

Top: Few classes excite people as much as the modified trucks.

Right: Up and coming 1/12 scale driver Vicky Carubba helped out the Bud's crew with some motor work.



someone threw together in their backyard. What gave me that impression was the lack of barriers. Most tracks I run on have very rigid barriers, usually PVC pipe or boards. This track did have a small board near some crucial corners, but it was mainly grass that separated one lane from another.

While this type of track construction seemed odd to me at first, I quickly saw the advantage. At this Nats, if a driver made a mistake he drove off into the grass. This caused a considerable amount of time loss, but usually the driver drove his own car back on without the assistance of a corner marshal. Turn marshaling at the '93 Nats

was absolutely no factor. That is the way it should be. In that respect, my hat is off to the Grand Rapids crew for their innovation.

The layout of the track was best described as mild. There was a three level staircase, a couple of small jumps, a double jump, and a tabletop jump. None of these jumps were severe, but they were substantial enough so that a driver had to deal with them. The most unusual aspect of this track, was the straight. Or more correctly, the lack of a straight.

After making multiple turns through the infield, the trucks went down, what looked like from the driver's stand, a long

straight. But if you walked to the back side of the track you would see this section was actually shaped more like the left parenthesis "(" . It took many racers, including myself, quite a while to figure out this seemingly easy section of the track.

Early rounds of qualifying looked good for Team Associated. In stock Scott Hughes astonished the crowd with the first 10 lap run. When the time was announced, a crowd formed at the tech table to see how he did it. Shortly there after, the line at the hobby shop swelled greatly. In mod, there were more 10 lap runs. Recent World Champion Brian Kinwald held the TQ mark for the first two rounds.



BSR Dominates NORRCA Paved Oval Nationals

Just Measure This!!

Six of Seven Class Winners Chose BSR's

"Thanks to all these National Champions"

EXPERT MODIFIED - Bruce Triplett EXPERT STOCK - Tommy Rhea
SPORTSMAN MODIFIED - Larry Bradshaw SPORTSMAN STOCK - Curtis Bonner
1/12 SCALE MODIFIED - Kevin Mc Intyre ENDURO 400 - Bob Light

BSR Racing Tires - Route 6 Box 54 - Killen, AL 35645 - (205) 757-1564

Back in stock, there were many discussions revolving around the motors used. The ROAR91 stock motor was created mainly to make stock as even as possible. I think after three years, it is safe to say they are a failure in that regard. I place the blame here on the manufacturers. Few seem happy to sell just a stock motor that is just the same as everyone's motor. They have ignored the

intent of the ROAR91 rules and skirted around gray areas to make a better motor. In many ways they have, but it goes against the intent of the class of motor.

For this race, attempts were made to ensure that nobody could use some of the well-known techniques to gain an advantage. The motor tabs were epoxied in place. That in itself is no big deal. The screws holding

the brush eyelets were also epoxied to prevent hood alignment and comm cutting. The obvious intent was to keep the competition tight, which it did. However, I fail to see how ROAR allows slotted armatures and reduced length wires but doesn't allow hood alignment and comm cutting. But that argument is for another time and place.

It was fun to watch the scramble that went on daily to find a way to improve the hand-out motors' performance. For the most part, no one person had an advantage. Several times I heard a unsponsored average racer say, "[INSERT FACTORY DRIVER'S NAME HERE] isn't any faster than I am." And they were right!

In the later rounds of stock qualifying it seemed that Losi/Twister driver Jeremy Kortz had found a secret. To be exact, Motorman Mike Walker had come up with something. As I saw it, Mike used a special tool to cut grooves into the brushes so that the brushes rode on sharp little points. Mike used the Competition Electronics dyno to show the results of his theory. Things were looking good for this combination of driver and pit man as Jeremy also captured the mod TQ title with his 13 turn Twister motor.

This left Losi with six entries in the A-Main, Associated with three entries, and Traxxas with one for the stock mains.

A six truck pile-up in the 2nd stock final race. Even the big guys have their pile-ups.



Modified Final Results

Final	Driver	Race #1	Race #2	Race #3	Total
1st	Brian Kinwald	10	8	8	18
2nd	Mike Dunn	8	9	7	17
3rd	Scott Hughes	7	1	10	17
4th	Greg Hodap	9	5	6	15
5th	Rick Vehlow	6	6	9	15
6th	Jeremy Kortz	2	10	4	14
7th	Matt Ledger	5	7	5	12
8th	Gil Losi Jr.	1	4	3	7
9th	Mark Pavidis	4	2	1	6
10th	Brian Dunbar	3	3	2	6

Note: Ties were broken based on the best run.

Stock Final Results

Final	Driver	Race #1	Race #2	Race #3	Total
1st	Jeremy Kortz	10	10	1	20
2nd	Scott Hughes	9	9	10	19
3rd	Jack Johnson	8	3	9	17
4th	Rick Vehlow	7	5	8	15
5th	Scott Roberts	4	8	6	14
6th	Matt Ledger	3	6	7	13
7th	Mike Dunn	5	7	5	12
8th	Jason Ruona	6	2	4	10
9th	Scott Brown	1	4	3	7
10th	Jon Anderson	2	1	2	4

For Modified, Losi had four entries in the A main along with five for Associated, and one for Traxxas. There were other interesting statistics from the qualifiers. In stock, where the motors seemed the most even ever, there was a difference of 5.89 seconds between the TQ to the last spot in the A main. The top 25 racers were within 15 seconds of the TQ mark. The margin was only slightly

larger in modified. In stock, five drivers, four of which were Losi's and one Associated, missed the A main by less than one second.

At Grand Rapids, the hottest equipment seemed to be springs. People were scrambling for the hardest motor springs and the softest shock springs. With some big modified motors being laid down, the Sanyo SCRCs were the batteries of choice.

They definitely are more available than just a year ago. It wasn't unusual to see these cells in stock as many drivers were gearing up to unheard of ratios in an attempt to get more speed out of the mediocre motors.

The new Losi transmissions were everywhere and all of the team drivers ran them without the outside shields. There has been some talk that these blue shields act as a drag on the

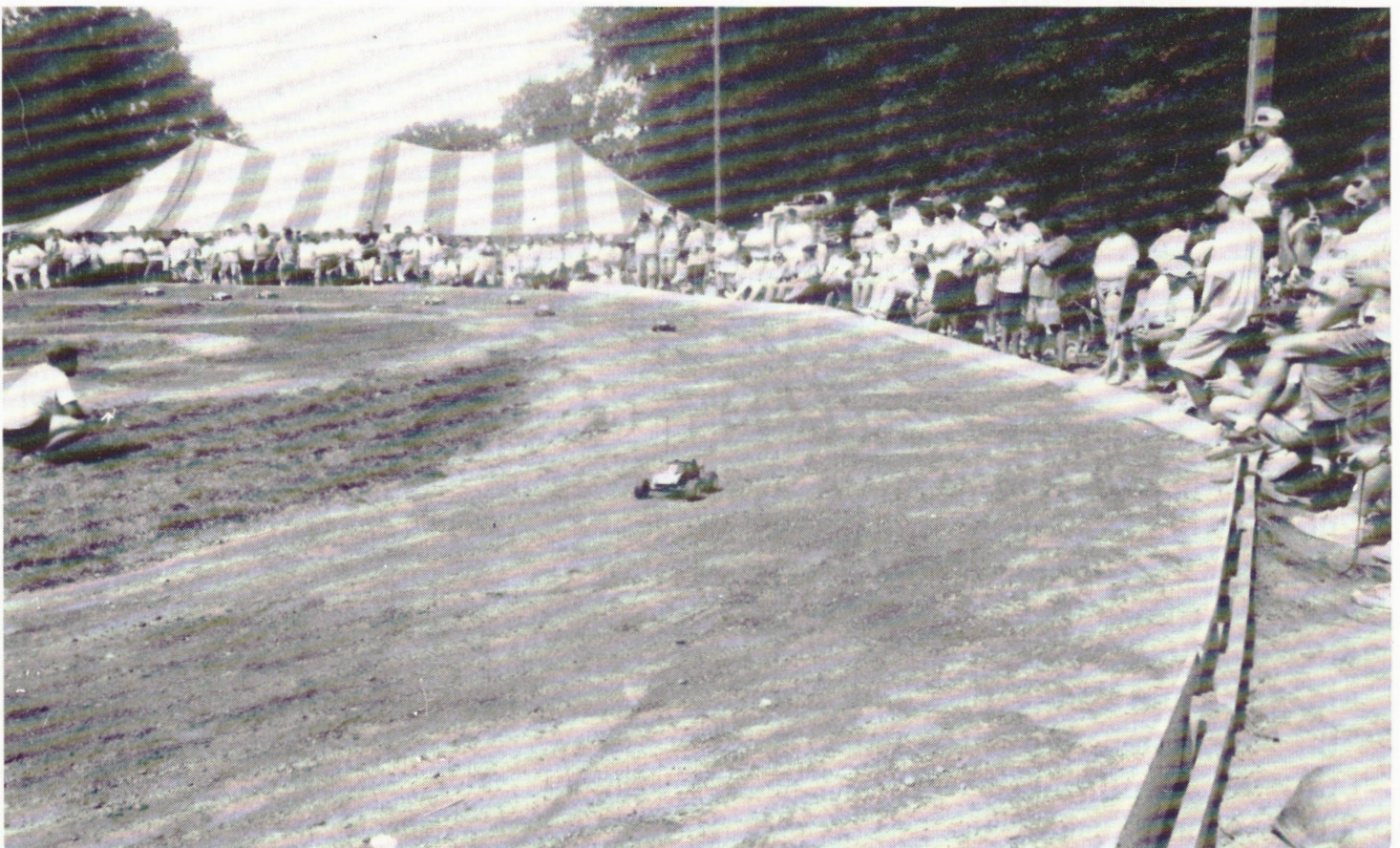
sociated truck as they came out just in time for this race.

After what seemed like a week of racing, the mains began Sunday morning. Mike Marshall was the first driver to hit 10 laps in the main while edging out Cliff Lett to win the "C". Gil Losi edged out Brian Kinwald to win the "B". Both drivers turned 10 laps in the main.

It was late morning when the first of the three stock "A" mains

roof. I didn't get the turn marshall's name, but the gentleman who was working that corner, a Rivertown club member, was paying close attention and had Jeremy back on his wheels without losing a position, but his lead was gone.

Jeremy was clearly the fastest truck out there. When he settled back down he rebuilt his lead back to three seconds and won easily. Scott Hughes and Jack



vehicles. Losi driver Jay Halsey didn't feel that was true. While he doesn't run them on his team cars, he recommends you use them for longer bearing life. Incidentally, many Losi vehicles used the car transmission in an attempt to find the right ratio for this track. Also popular were the Hydra-drive kits for the As-

was ran. Jeremy Kortz took advantage of his front row start and put his LXT out front right away. Each lap he added a fraction of a second to his lead over Scott Hughes and Jack Johnson. By the fourth lap that lead was more than three seconds. As Jeremy came down the staircase he rolled his Losi truck on to its

Johnson finished seconds later. Clearly some motor work was in order if anyone was going to catch Jeremy. With Jeremy starting up front, that task might prove insurmountable.

A good crowd was on hand for the finals. Also note the grass infield areas. This kept drivers from cutting the corners.

Although Jeremy has won several major titles lately, he appeared a little nervous at times. I think some drivers tried to capitalize on that by threatening to throw Jeremy in the river if he won.

The second stock A main seemed like a rerun of the first, with two differences. First, Jeremy didn't make a mistake. Second, Scott Hughes seemed just as fast as Jeremy, at least for the first three and 1/2 minutes. Jeremy pulled away slightly on Hughes during the 9th and 10th lap giving Mr. Kortz his first truck National title. The title was the sixth truck title, out of a total of seven, won by Team Losi.

The new stock champion

didn't run the 3rd A main and Scott Hughes won that one edging out Jack Johnson.

It was late Sunday afternoon when the modified mains began. The first A main started well for Team Associated with three of the first five trucks being RC-10Ts. It would end as a battle between Hodap and Kinwald with Brian beating Greg to the line by .97 seconds. Mike Dunn finished a strong third to position himself well for the next two rounds. Mark Pavidis, the defending mod champ, was 7th in the first heat.

TQ Jeremy Kortz got a great start in the 2nd heat, but Brian Kinwald came along and tucked himself right behind Kortz. It was my perception that the vet-

eran Kinwald was making sure that he stayed in Jeremy's view with the hopes of shaking up the less experienced, but talented younger driver.

On the third lap it looked like that strategy would pay off. The pressure was clearly on Kortz and his Twister powered Losi truck. If Jeremy didn't make a mistake, Kinwald would have a 1st and a 2nd place, which would put him in a strong position for the championship. A mistake by Kortz would hand the title to Kinwald if Brian held on to win. Jeremy fish-tailed on this lap and the race became even tighter. Meanwhile Mike Dunn closed in moving up two places to fourth. Scott Hughes suddenly developed radio problems

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(assumed) and Dunn was up to third.

Dunn's fifth lap was one of the weekend's fastest and moved him up to second, passing Kinwald. At this point Kortz had about a 25-foot lead over Dunn. Dunn closed it up slightly, but got his front end up in the air on the doubles. That ended his chase for the lead. They finished the 2nd A main in that order.

This gave one win and a third to Kinwald, a win and a 9th place finish to Kortz, and a 2nd and 3rd for Mike Dunn. A win for Brian or Jeremy would win the title. Dunn could get the title with a win if Kinwald did no better than 3rd in the 3rd run. Another possibility would be if none of the above finished up front in the third run. This would lead to the undesirable idea of waiting for the scorekeeper to tally the results while everyone waited.

In round three, Jeremy Kortz led the first two laps. This put him three minutes from his 2nd national title of the day. Early it was Scott Hughes and Rick Vehlow chasing Jeremy. Kinwald was a close 4th for the first half the race. At the halfway point Hughes closed to even with Kortz and they ran toe to toe for an entire lap. Hughes saw his opening as Kortz rolled. This put Vehlow up to 2nd with Kortz back to third along with Kinwald.

In the remaining moments Scott Hughes began to pull away. Scott, with a 4th and a 10th didn't have a shot at the title.

Vehlow was second after having placed 6th and 2nd in the first two runs. That left the title in the hands of Kinwald and Dunn who were running 3rd and 4th. That is just how they finished. Fortunately, you wouldn't have to wait as long as we did to find out the results of the 1993 ROAR Modified Truck Nationals. For you statistics freaks, this was the second year that Losi won stock and Associated won modified. In four years of truck racing Losi has won six of eight titles with Associated winning the other two. Jack Johnson and Kyle Reed have two titles each. Kyle is the only two time stock winner and Jack Johnson is the only two time modified winner. Four drivers have one title each. This year's stock winner, Jeremy Kortz and mod winner Brian Kinwald are first time Truck Nats winners. The other two titles belonged to Mike Dunn (Stock '91) and Mark Pavidis (Mod '92) Three of the four Truck Nats have been east of the Mississippi River so I expect the '94 event will move back to the west. I hope you westerners enjoy what is the most popular Nats here in the midwest.

B Main

- 1st - Gil Losi, Jr.
- 2nd - Brian Kinwald
- 3rd - Brian Dunbar
- 4th - Greg Hodap
- 5th - Mark Pavidis
- 6th - Mike Blackstock
- 7th - Bryan Peterson
- 8th - James Ward
- 9th - Scott Rister
- 10th - Jay Halsey

C Main

- 1st - Mike Marshall
- 2nd - Cliff Lett
- 3rd - Larry Plank
- 4th - Todd Lewis

- 5th - Gary Studt
 - 6th - Keith Tessmer
 - 7th - Brent Wallace
 - 8th - Jim Bronson
- #### **D Main**
- 1st - Jeff Villemure
 - 2nd - Dean Karnes
 - 3rd - Dan Fisher
 - 4th - Chris White
 - 5th - Todd Hodue
 - 6th - Peter Maiolo
 - 7th - Jack Wilson
 - 8th - Tim Vause
 - 9th - Mike Zavoda
 - 10th - Drew Richards
- #### **E Main**
- 1st - John Walters
 - 2nd - Phillip Thomas
 - 3rd - Scott Cain
 - 4th - Wylder Barrows, III
 - 5th - Jeff Gletz
 - 6th - Randy Kato
 - 7th - Bob Bean
 - 8th - Anthony Lewis
 - 9th - Sean Glazar
 - 10th - Jason Clark
- #### **F Main**
- 1st - Chris Mockerman
 - 2nd - Mike Sutherland
 - 3rd - Todd Hicks
 - 4th - Chuck Berg
 - 5th - Joe Weeman
 - 6th - Keith Hamilton
 - 7th - Troy Weber
 - 8th - Wade Whitaker
 - 9th - Brian Kadow
 - 10th - Dan Hadley
- #### **G Main**
- 1st - Craig Xavier
 - 2nd - Bob Moore
 - 3rd - Joe Freitas
 - 4th - Jeff Brown
 - 5th - Bob Zahn
 - 6th - Mike Wolf
 - 7th - Michael Thomas
 - 8th - Jeff Swartz
 - 9th - Dave McEwen
 - 10th - John Jones
- #### **H Main**
- 1st - James Brink
 - 2nd - Shawn Planko
 - 3rd - Doug Jones
 - 4th - Ronald Savoie
 - 5th - Mike Detmers
 - 6th - Jesse Juneac
 - 7th - Bob Novak
 - 8th - Rod Rippee
- #### **I Main**
- 1st - Scott Walter
 - 2nd - Mike Powell
 - 3rd - Edward Hawkins
 - 4th - Mike Villemure

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2nd - Steve DeArmon
3rd - Jonathan Alexander
4th - Dave Czerniejewski
5th - Travis Dupree
6th - Greg Powrie
7th - John Socha
8th - Ivan Taylor
9th - Jeremy Taylor
10th - Joshua Vollmar
K Main
1st - Eric Prevost
2nd - Michael Vitale
3rd - David Beam
4th - Mike Murray
5th - Jake Myers
6th - John Barron
7th - Steve Brummett
8th - Dave Bengtson
9th - Brent Darroch
10th - Craig Boardman
L Main
1st - Bill Abolt
2nd - Steve Clausing
3rd - Adrian Melillo
4th - Dana Bailes
5th - Mike Stoll
6th - Dwight Baugher
7th - Mike Slaughter
8th - Ricardo Wright
9th - Larry Fairtrace, Jr.
10th - Dan Vollmar
M Main
1st - Josh Cyrul
2nd - Brad Farmer
3rd - Brian Smith
4th - Chris Betzer
5th - Marc Morr
6th - Cary Heckman
7th - Tim Sibley, Jr.
8th - John Abatto
9th - Shain Alexander
N Main
1st - Marlon Binion
2nd - Jeff Hyatt
3rd - Danny Jenkins
4th - Mike Kendricks
5th - Fred Oles
6th - Jim McGinness
7th - Jeff Schroeder
8th - Joe Bobrowski
9th - James Badford
O Main
1st - Andre Su
2nd - Jeff Pryor

3rd - Jeff Crowell
4th - Peter Beers
5th - Tim Sibley, Sr.
6th - Dan Williams
7th - Rob Schaffer
8th - Don McMillan
9th - Mike Berkley
10th - Adam Drake
P Main
1st - Derek Willkomm
2nd - Jon Fulmer
3rd - Brad Cusac
4th - Mitch Shisler
5th - Chuck Bartholomew
6th - Ron Ribbink
7th - Eric Nordin
8th - Mark Smyka
9th - Tim Elenz
10th - Nate Wagner
Q Main
1st - John Przonek
2nd - James Cody
3rd - Derek Ziegler
4th - Paul Pazanin
5th - Larry Riggins
6th - Steve Jordan
7th - John Pennington
8th - Norman Franks
9th - Gregg Moore
10th - Tom Whalen
R Main
1st - Alex Moultray
2nd - Jeff Todd
3rd - Mark Scott
4th - Phil Elisio
5th - Gene Heath
6th - Sam Sprang
7th - David Molina
8th - Alvin Guy, III
9th - Tony Carrubba
10th - Jesse DeArmon
S Main
1st - Jody Flipse
2nd - John Argentino
3rd - Joe Brown
4th - Jim Mazurek
5th - Gary Ziegler
6th - Mark Gorney
7th - Bill McCall
8th - Shawn Shadow
9th - Robert Brown
T Main
1st - Eric Cowden
2nd - Wendell Light
3rd - Sharon Bean
4th - Joe Ruberto
5th - David Hering
6th - Don Schondelmayer
7th - Ed Elenz
8th - Larry Dommer
9th - Dave Nichols
10th - Larry Fairtrace, Sr.

U Main
1st - Mike Flipse
2nd - Joe Beregszaszy
3rd - Adam Boyd
4th - Jason Land
5th - Jane McMillan
6th - Ken Hamilton
7th - Steve Stokes
8th - Dave Elenz
9th - Ian Caldwell
V Main
1st - Tim Sundre
2nd - Paul Davis
3rd - Nick Davis
4th - George Mockerman
5th - William Fry
6th - Larry Dubois
7th - Gary Climie
8th - Tim Earl
9th - Randy Stanham
W Main
1st - Bruce Tremayne
2nd - Russell Leach
3rd - Mart Belovicz
4th - Beverly Dubois
5th - Gordon Heeres
MODIFIED RESULTS
B Main
1st - Scott Roberts
2nd - Gary Studt
3rd - Jay Halsey
4th - Jon ANDerson
5th - Jason Ruona
6th - Cliff Lett
7th - Jack Johnson
8th - Scott Brown
9th - Scott Rister
10th - Bryan Peterson
C Main
1st - John Walters
2nd - Mike Blackstock
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9th - Drew Richards
10th - Dave McEwen

F Main

1st - Sean Glazar
2nd - James Brink
3rd - Scott Cain
4th - Jeff Swartz
5th - Adrian Melillo
6th - Brian Howell

G Main

1st - John Jones
2nd - Todd Hodge
3rd - Shawn Planko
4th - Larry Plank
5th - Larry Rice, III
6th - Jeff Geltz
7th - Eugene Ryder
8th - Adam Drake
9th - Phillip Thomas
10th - Mike Zavoda

H Main

1st - Chuck Berg
2nd - Keith Hamilotn
3rd - Bob Zahn
4th - Michael Thomas
5th - Mike Murray
6th - Jonathan Alexander
7th - David Beam
8th - Jeff Brown
9th - Wade Whitaker
10th - John Abatto

I Main

1st - John Rybicki
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3rd - Dan Hadley
4th - Mike Powell
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6th - Walter Henderson
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8th - Mike Villemure
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7th - Rob Schaffer
8th - Bob Bean
9th - Steve Clausing
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4th - Jake Myers
5th - Jeff Crowell
6th - Jesse Juneac
7th - Jeff Durling
8th - John Argentino
9th - Nick Zaccaro

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8th - Jacob Pritchard
9th - Ronald Savoie

P Main

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8th - Joe Brown

9th - Mike Flipse

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6th - Ken Hamilotn
7th - Dan Vollmar
8th - Joe Bobrowski
9th - Tim Sunde

T Main

1st - Jody Flipse
2nd - Barry Fulcher
3rd - James Radford
4th - Don Schondelmayer
5th - Jim Maginity
6th - Shawn Shadow
7th - Mike Killebrew
8th - Jane McMillan
9th - Russell Leach

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3rd - Paul Davis
4th - Tim Earl
5th - William Fry
6th - Larry Dommer
7th - Ian Caldwell
8th - Nick Davis
9th - Randy Stanham

V Main

1st - Bruce Tremayne
2nd - Mark Scott
3rd - Tom Killebrew
4th - Mart Belovicz

The 1993 IFMAR 1/10



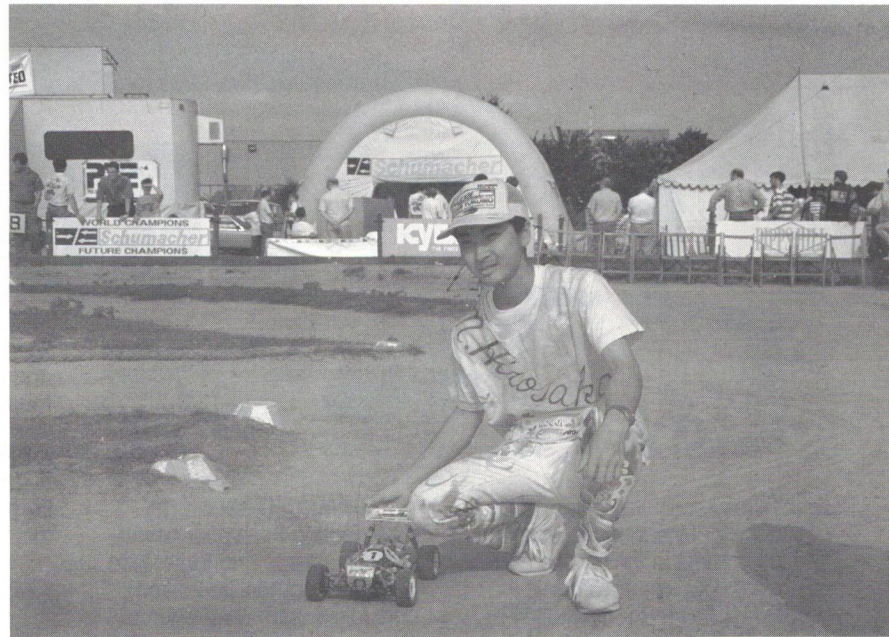
Off-Road Worlds

By Marco
Di Marchi



The off-road world converged on Basildon, England for the fifth running of the IFMAR 1/10 Off-Road World Championships. The race was from July 28th to August 8th. All the drivers were there to try to unseat the 1991 2WD Champion, Masami Hirosaka and the 1991 4WD Champion, Cliff Lett.

Spread: Always exciting for the participants, the opening ceremonies kick things off. Top: Brian Kinwald was victorious in the 2WD Class. Bottom: Masami dominated the 4WD division.





DOUBLE TEAM

Masami Hirotsuka led a 1-2 finish in the 1991-92 World's. Cliff Lett leads the RC10 design team.

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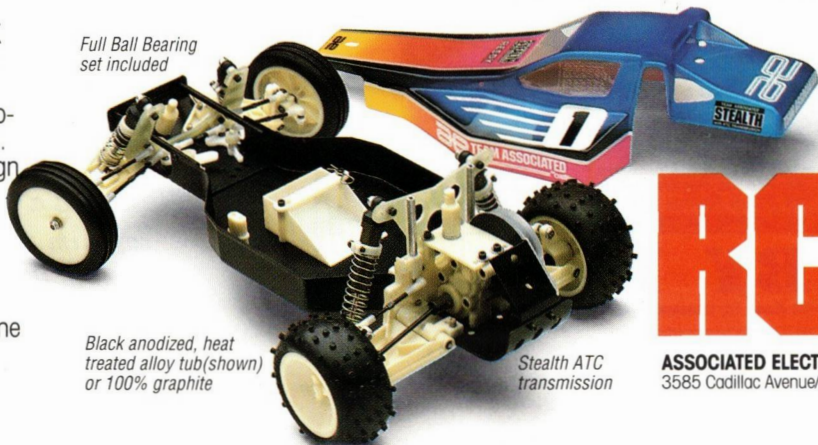
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Stealth ATC transmission

RC10 TEAM CAR

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Before I get into the race coverage, congratulations are offered to the English Federation for their fine job in hosting this prestigious world event for the second time.

Among the drivers present was Craig Drescher, fresh off the European title, both in 2WD and 4WD. Drescher would head

up the English team which many felt would be fast. Beside the English team we also knew that the German drivers who were entered would be very competitive. Among them were Jurgen Lautenbach and Sasha Falter. The numerous Japanese team, which included Masami Hiro-saka (2WD World Champion),

had a lot of very experienced drivers that could place themselves in the final, especially in the 4WD class.

The American team was well represented at the worlds with 45 drivers. From Team Associated you had the current 4WD World Champion, Cliff Lett, along with Mark Pavidis, Brian Kinwald, J. D. Beckwith and Matt Ledger. Team Losi/Trinity sparked particular interest because they were debuting their new "Double X". This team was lead by drivers like Joel Johnson, Jay Halsey, Jack Johnson and Mike Dunn, plus a few young but very fast drivers like Scott Brown and John Koonce. Rick Hohwart and Carlos Gonzales were competing under the banner of Team Peak Performance/Orion.

There were two major worries for the 150 participants. The first was that the English track was made of very hard, packed dirt. The second concern was the weather, it looked as if we would be in for a great deal of rain. The track was completely opposite to the one that was used in Detroit in 1991. Due to the hard packed track, all of the manufacturers provided their

Joel Johnson made a spectacular bid to take home a second off-road World title. Joel was TQ in the 2WD class and had a first and second in the first two finals. Rain and a poor track may have cost him the title in the third round of the finals. Nonetheless the Double X car worked well .

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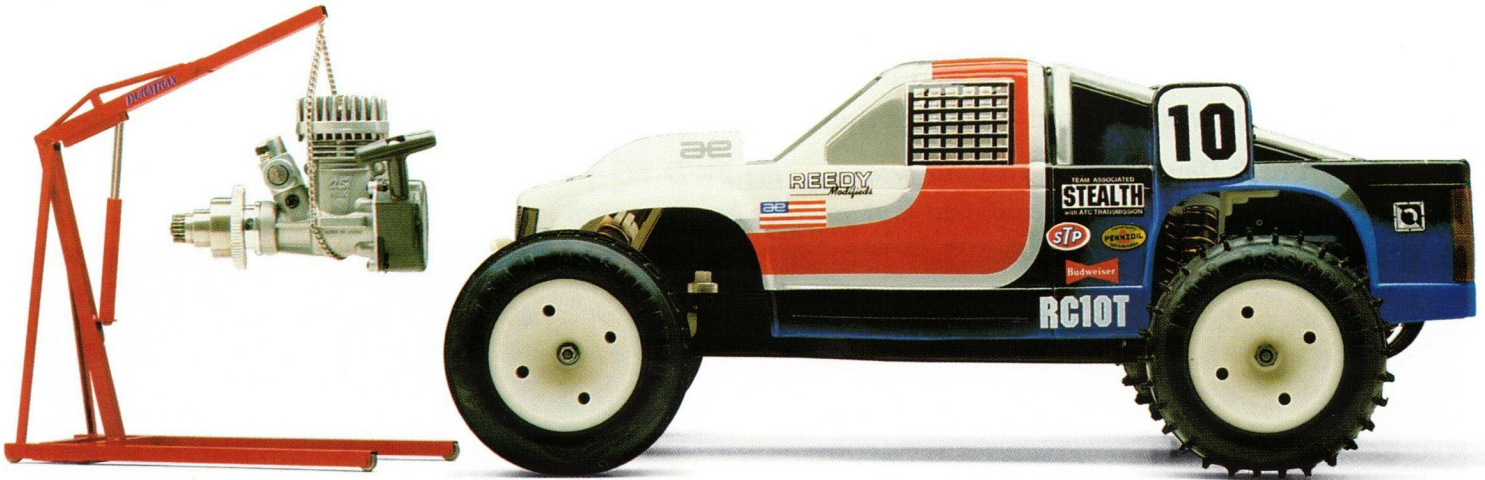
BL-2301 '93 Pontiac Narrow with roof rails & add-on rear spoiler
 BL-2302 '93 T-Bird Narrow with roof rails & add-on rear spoiler
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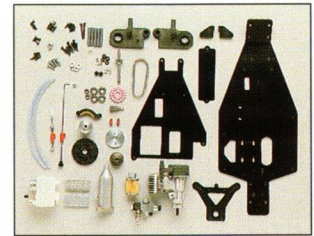
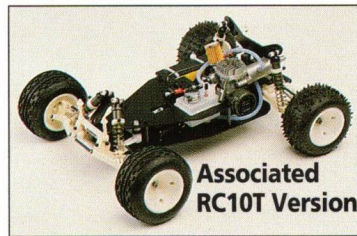
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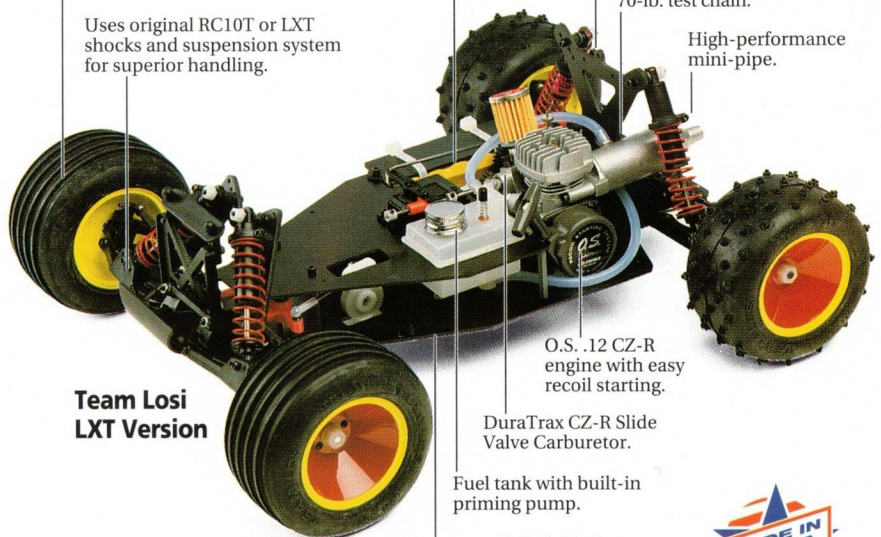
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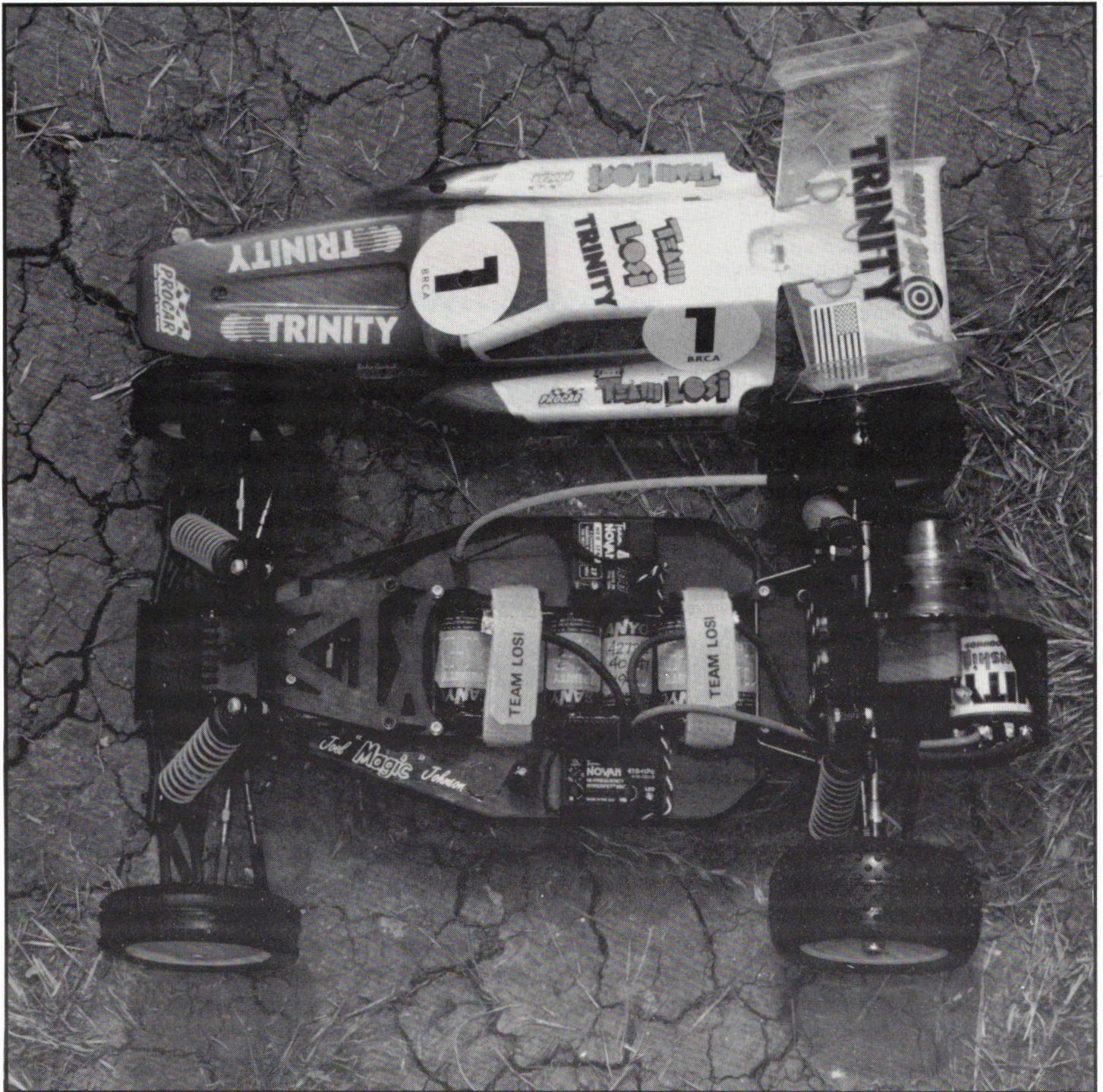
racers with rubber tires that were very soft and had a lot of traction, which were specially engineered for tracks with hard compacted dirt. For the first time in World Championship history the track was changed

between the 2WD and 4WD events. The track for the 2WD cars was more difficult to go around using chicanes that were not used during the 4WD competition. In addition to the chicanes there was only one jump

on the main straight-away.

For the first four days practice took place with the same system used in Detroit. Fifteen drivers were allowed on the track for 10 minute sessions, 2WD or 4WD cars were both allowed at

Losi/Trinity's Double X car. This one belongs to the 2WD TQ Joel Johnson. As well as this car did this week everybody's confident that you'll be hearing much more about this machine.



2WD RESULTS

<u>POSITION & NAME</u>	<u>NATION</u>	<u>CAR</u>	<u>MOTOR</u>	<u>BATTERIES</u>
1st - Brian Kinwald	USA	RC10	Reedy 12x2	Reedy Sanyo SCRC
2nd - Joel Johnson	USA	LOSI	Trinity 13x2	Trinity P. Sanyo
3rd - Craig Drescher	Great Britain	RC10	Reedy 12x2	Keil Sanyo SCRC
4th - Masami Hirosaka	Japan	RC10	Reedy 12x2	Yokomo Sanyo SCRC
5th - Matt Francis	USA	RC10	Reedy 12x2	Reedy Sanyo SCRC
6th - Scott Brown	USA	LOSI	Revol. 13x2	Exell Racing Sanyo
7th - Mark Pavidis	USA	RC10	Reedy 11x4	Reedy Sanyo SCRC
8th - Matt Ledger	USA	RC10	Reedy 11x5	Reedy Sanyo SCRC
9th - John Koonce	USA	LOSI	Trinity 14x4	Trinity Pushed Sanyo
10th - Carlos Gonzales	USA	RC10	Peak P. 13x2	T. Orion Sanyo SCRC

this time. With the beginning of practice everyone could see that the bite was increasing directly proportional to the amount of cars that ran on the track. The new tires, specially designed by Schumacher and Losi proved to be very good for the hard track, so good in fact that it began to look like an on-road race. From the beginning it was evident who was going to be competitive.

As the days progressed the track began to develop potholes and ruts and most drivers were forced to change their set ups. After a couple of days of practice the Losi drivers were becoming more acquainted their new Double X's and they began to move up. In particular Joel Johnson was turning in fast times with seemingly little effort. Among the Associated drivers Cliff Lett and Masami Hirosaka were having some trouble getting acquainted with the track. After the first two days of con-

trolled practice, everyone knew that the track was going to deteriorate as the days progressed. Therefore, in order to turn in a fast time it became obvious that you would have to do it in the early rounds of qualifying.

At the end of the first day of 2WD qualifying Mark Pavidis was TQ with 12 laps in 5:08.43. He was followed by Matt Francis, Scott Brown, Joel Johnson and John Koonce respectively. In the top ten there were also a couple of Schumacher drivers, Matthew Needham in eighth and Ben Sturnam in tenth.

In the second round of qualifying a lot of drivers improved their times. This moved everyone around on the leader board. Joel Johnson now took over the TQ spot with 12, 5:04.85. Joel was followed by Scott Brown a second behind. In fifth place was Carlos Gonzales, followed by local favorite Craig Drescher and Masami Hirosaka.

It was in the third round of qualifying where we saw the track starting to deteriorate. The times suffered and only Brian Kinwald was able to better his time with an impressive 12, 5:11.44 placing him eighth overall. From this moment on the top ten didn't change due to the deterioration of the track.

Wednesday, August the 4th marked the day of the 2WD World Championship finals. Unfortunately the weather didn't look good and there was a high possibility of rain. With the approach of the start of the first heat of the A Main, hundreds of people crowded around the track to get a good view of the event. Joel Johnson shot into the lead followed by Mark Pavidis and Craig Drescher. Mark and Craig were racing side by side and crashed while battling for position, losing some ground on Johnson. At the two and a half minute mark Brian Kinwald

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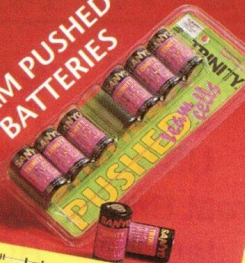
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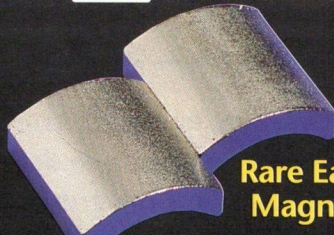
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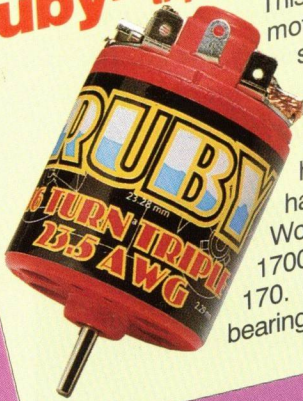


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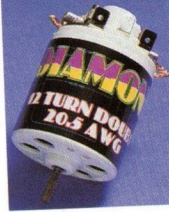


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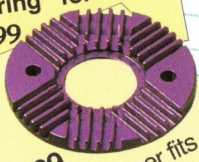
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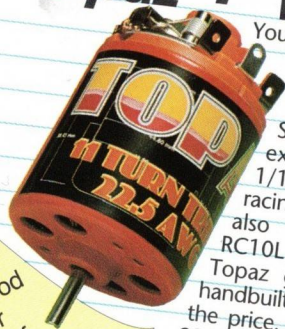
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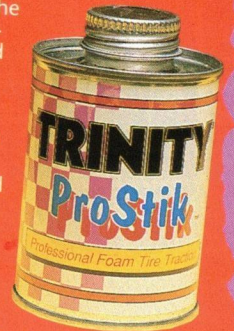


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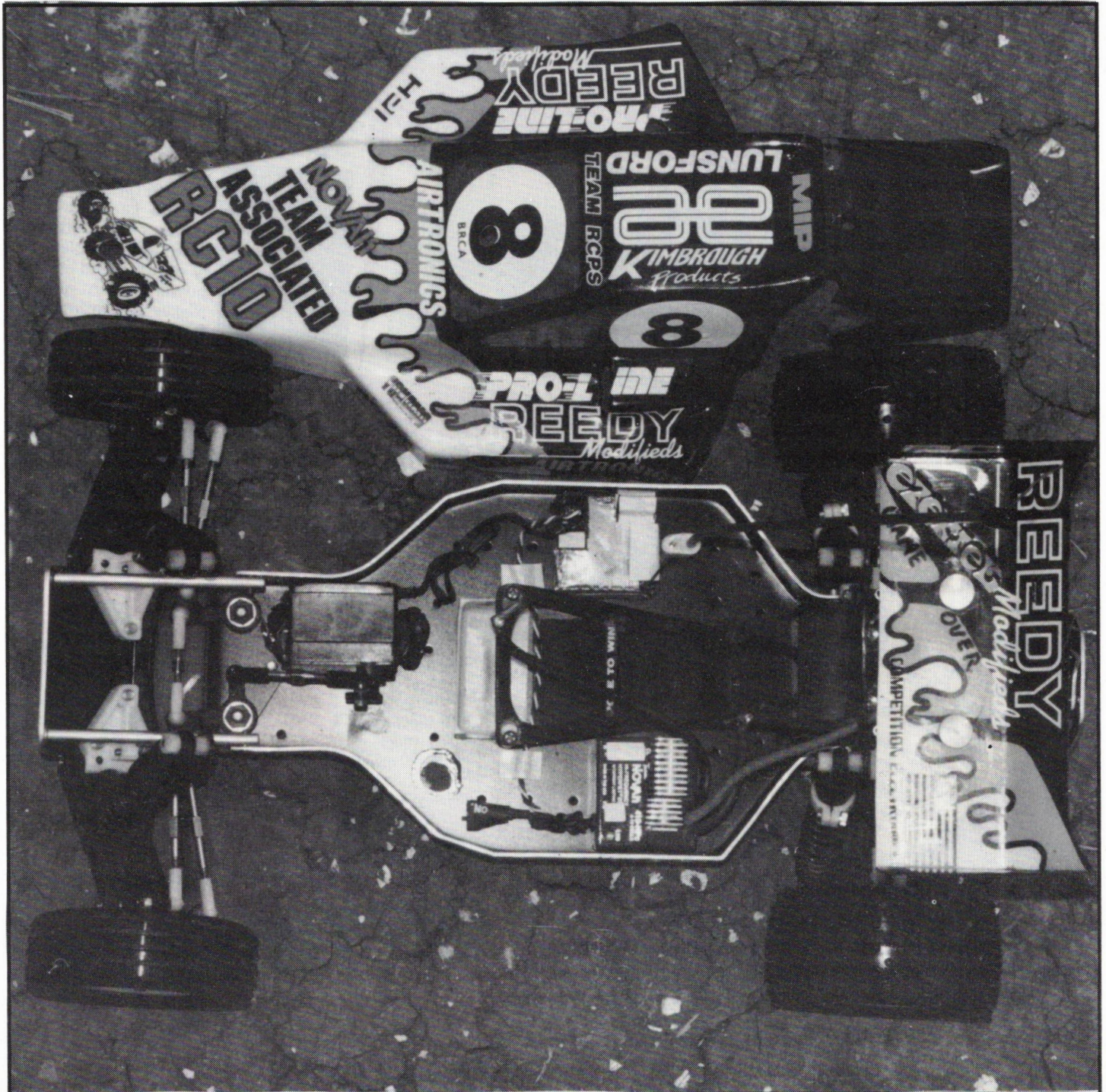
was moving up and made his way past Pavidis into second spot closing in on Joel. Soon Kinwald and Johnson were side by side. With only about two laps to go, Brian went for broke and flipped it over the big jump. This left Johnson with an open track to the finish line, taking

the first leg. Second was Brian Kinwald and after a bad start, Scott Brown was able to finish third.

In the second leg, Brian Kinwald and Matt Francis got a terrific start from the middle of the grid, and both moved right behind Joel Johnson. At this

moment Joel seemed to be in complete control of the race but after two minutes of trying to close the door on Kinwald, he

The most victorious car in off-road history, the RC10. This car belongs to World Champ Brian Kinwald.



4WD RESULTS

<u>POSITION & NAME</u>	<u>NATION</u>	<u>CAR</u>	<u>MOTOR</u>	<u>BATTERIES</u>
1st - Masami Hirosaka	Japan	Yokomo World Champs Spec.	Reedy 10x2	Yokomo Sanyo
2nd - Kevin Moore	Great Britain	Schumacher Cat 2000	LRP Magic	LRP Sanyo
3rd - William Mitcham	Great Britain	Schumacher Cat 2000	Corally 12x2	GXX Orion
4th - Shinnosuke Adachi	Japan	Yokomo World Champs Spec.	Reedy 11x2	Yokomo Sanyo
5th - J. D. Beckwith	USA	Yokomo with Dukes Access.	Reedy 12x2	Orion Sanyo
6th - Mark Pavidis	USA	Yokomo World Champs Spec.	LRP Magic	LRP Yokomo
7th - Rick Hohwart	USA	Yokomo World Champs Spec.	Peak P. 12x3	Orion Sanyo
8th - Joel Johnson	USA	Kyosho Lazer ZX-R	Trinity 11x5	Trinity Sanyo
9th - Derek Furutani	USA	Yokomo World Champs Spec.	LRP Magic	LRP Yokomo
10th - Ben Sturnham	Great Britain	Schumacher Cat 2000	Tanaplan	Orion Sanyo

flipped leaving Kinwald in the lead. From this point Joel was playing catch up passing Drescher, Pavidis and Francis to move back into second. With just seconds remaining Johnson didn't have enough time to catch Kinwald. Brian took first, Joel second and the two were now tied for first place. The third leg would be a real dogfight between the two. As it figured, no one else had a chance at the crown and at this level of racing it truly becomes a situation where there are no points for second.

Unfortunately the English weather did not cooperate and before the start of the third leg, it began to rain changing the track conditions. Also, some of the lower mains were run between the second and third leg on the wet track which contributed to the deterioration of the track even more. With these new track conditions it would be hard

to say who would have the advantage in the last leg. Many felt it would fall to Kinwald with his greater experience in off-road car set-up. Secondly, Kinwald was running an RC10 which has been around for a while. Johnson was using the new Double X car.

At the start of the third leg, all the drivers used a more cautious approach and avoided the potholes on the track. Kinwald got a good start and found himself in the lead group of Johnson, Drescher, Masami and Frances.

It seemed Joel had the most trouble negotiating this "new" track and I believe it is because he chose the wrong tires. These tires didn't perform well on a muddy track. Pressed by Kinwald, who seemed to be faster, Joel made an error on a jump, and while trying to make up time he errored again losing any chance at winning the race.

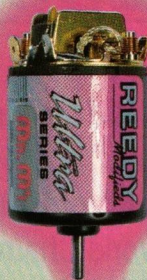
Kinwald did a great job closing the door on Drescher and Masami, even though they seemed faster than he. To the applause of all the fans, Kinwald crossed the line victorious, taking the world's crown.

Whether the weather ultimately cost Joel a second world title is debatable. In this writer's opinion however, the drastic change in the track's condition certainly did not help Johnson. What would have been on a track that was more consistent we'll never know. Anyway we must congratulate Brian for a race well run.

Thursday, August 5th, and everyone was back on the track for tech inspection and 2 rounds of controlled practice for the 4WD Championships. From the beginning everyone knew the world title would come down to a fight between the Yokomo and the Schumacher, both debuting a new model. Less of a threat

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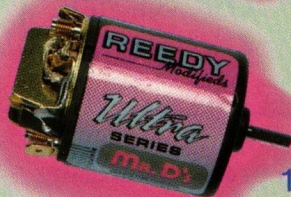
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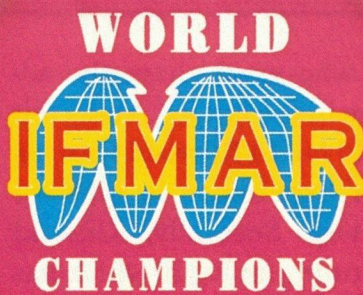
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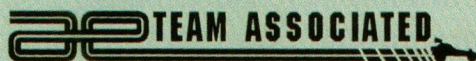
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was the Kyosho that was being run by Joel Johnson, Mike Dunn, Kris Moore and Jack Johnson. As written earlier, the track was modified by taking out the chicane and putting in a small jump and a very difficult off camber turn. A lot of credit should be given to the organizers who put in a lot of hard work putting the track into good shape. After the

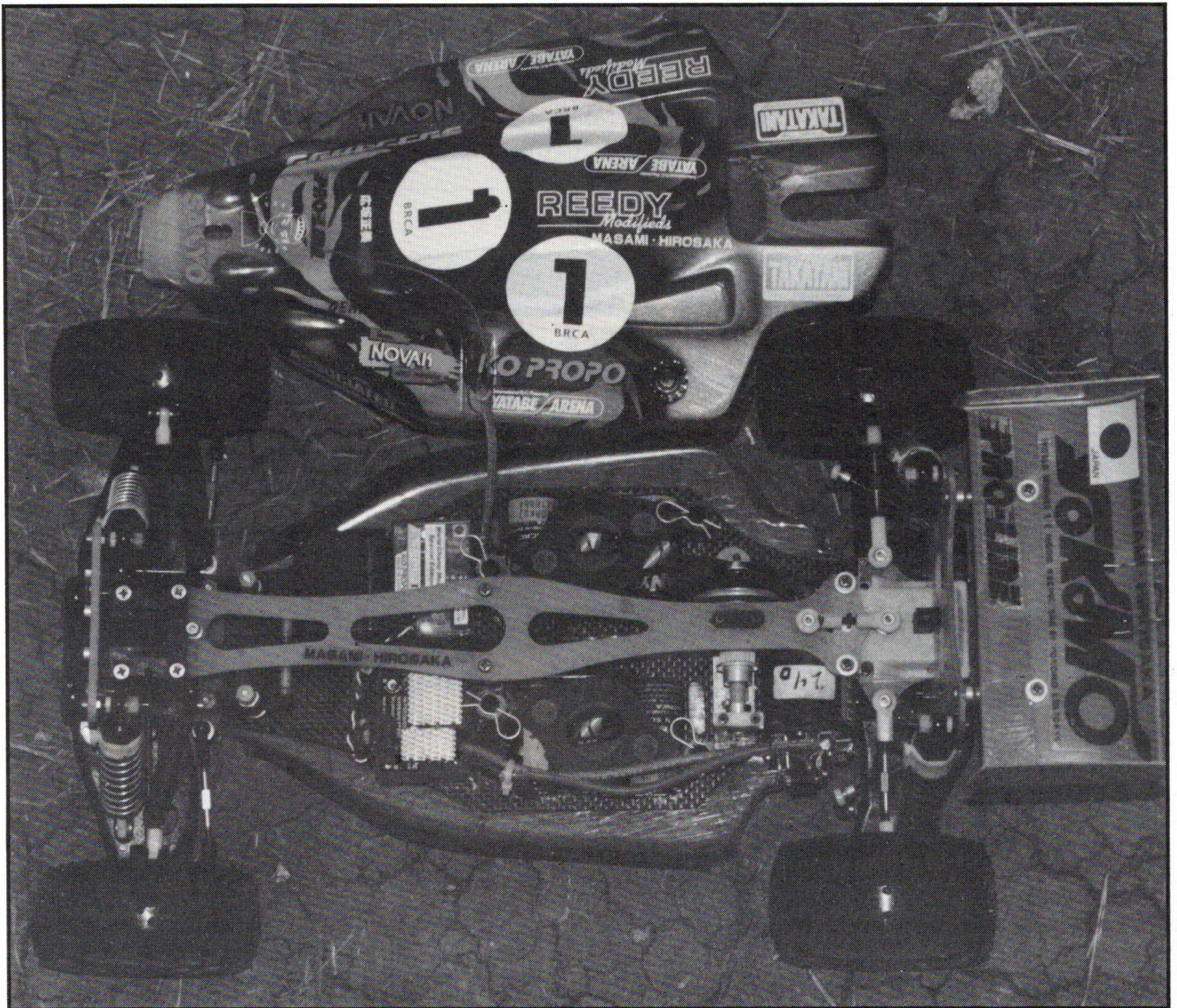
two rounds of practice, it was clear Masami and his Yokomo Works 95 was the combo to beat.

Friday was the beginning of the first three rounds of qualifying. The track in the first round was not very fast and only the drivers from the last heat were able to get a good time in. Once again the fastest was Masami.

He was the only driver to complete 13 laps in 5:17.87 beating Kevin Moore and his Schumacher/LRP combo by nearly 10 seconds!

In the top ten there were two English drivers, William Mitcham and Rory Cull, all the others were Americans. Out of these the best was J.D. Beckwith, who was in third spot with

The 4WD winning car of Masami Hirosaka. This Yokomo World Champs Special car was powered by a Reedy Motor and Yokomo Sanyo batteries. Masami won the first two of three finals to capture the 1993 4WD Off-Road World crown. Masami was only one of two Japanese drivers to make the finals.



Pavidis in fourth.

In the second round of qualifying the track was faster and all of the drivers bettered their times with the exception of Masami. In the second spot was Derek Furutani who turned in a 13 lapper in 5:20.84 with his Yokomo/LRP.

Also the Schumacher did extremely well, placing five drivers in the top ten. Mitcham was in third, Sturnham and Lautenbach were sixth and seventh respectively. And, Morgan and Kevin Moore were ninth and tenth.

The third round of qualifying began with a good time turned in by Joel Johnson. Joel turned

in a 13, 5:20.90 placing him in the top ten. All the rest of the field improved their times and now we had 12 drivers in the 13 lap bracket. Masami still didn't improve his time but he was still holding the TQ. He was followed by Ben Sturnham and William Mitcham. Also making it into the top ten were Brian Kinwald, in eighth, followed by Mike Dunn and Jurgen Lautenbach.

Contrary to the race in 2WD, it seemed like the track held up well and even in the second day of qualifying the drivers were able to turn in good times. We found Rick Hohwart to be the first to improve his time placing

his Yokomo/Peak Performance in fourth position, in front of the Yokomo/Reedy of J.D. Beckwith. Even Masami was able to improve his TQ time, turning in a 13, 5:16.06 by racing a perfect race.

In the fifth round of qualifying the Englishman Ben Sturnham and his new Schumacher turned in a great run of 13, 5:15.62. Placing him ahead of Masami and into the TQ spot, with the enthusiasm of the English fans. Another quick time was turned in by the young Japanese, Shinnosuke. He turned in a 13, 5:18.81 placing him fifth overall just ahead of Kevin Moore with his 13, 5:20.13. With

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a very consistent run, Mark Pavidis entered the top ten bumping Jurgen Lautenbach to the eleventh position overall. In the final round, the track was still found to be very fast even though it developed a few pot-holes, increasing the possibility to commit errors. Everyone, including Masami, was hoping to get in a good run in the last round. As it became Masami's turn to race everyone wondered if he was going to be able to turn in another great run and regain his TQ position. Masami knew it was still possible as William Mitcham was able to improve his time in the sixth round.

From the first few laps Masami was turning in some very fast times about 1/2 second faster than everyone else. He finished the heat with only a few bobbles. He ended up with a 13, 5:09.01 beating the TQ time of Sturnham by 6.5 seconds!

On the day of the finals you could see that Masami was in form to defend his title and as a matter of fact, he won the first two heats. The mains were not as climatic as in the 2WD class. Masami was able to conquer the world title without even racing all three races. Behind him were the Schumacher racers, Kevin Moore and William Mitcham in

second and third. Rick Hohwart after a third in the first heat, was not able to better himself. He finished in 7th in front of Johnson and behind Pavidis. Johnson brought the only Kyosho Laser into the final.

What we, as racers, will remember of the 1993 Off-Road World Championships at the 1995 race is still too early to tell. Certainly some fine driving performances by the two world champs will come to mind. Changing track conditions and formidable racing weather can't be forgotten either. Ultimately, though it will be the desire to win that will never be forgotten.

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Fun Nitro Style!

By Bill McCall

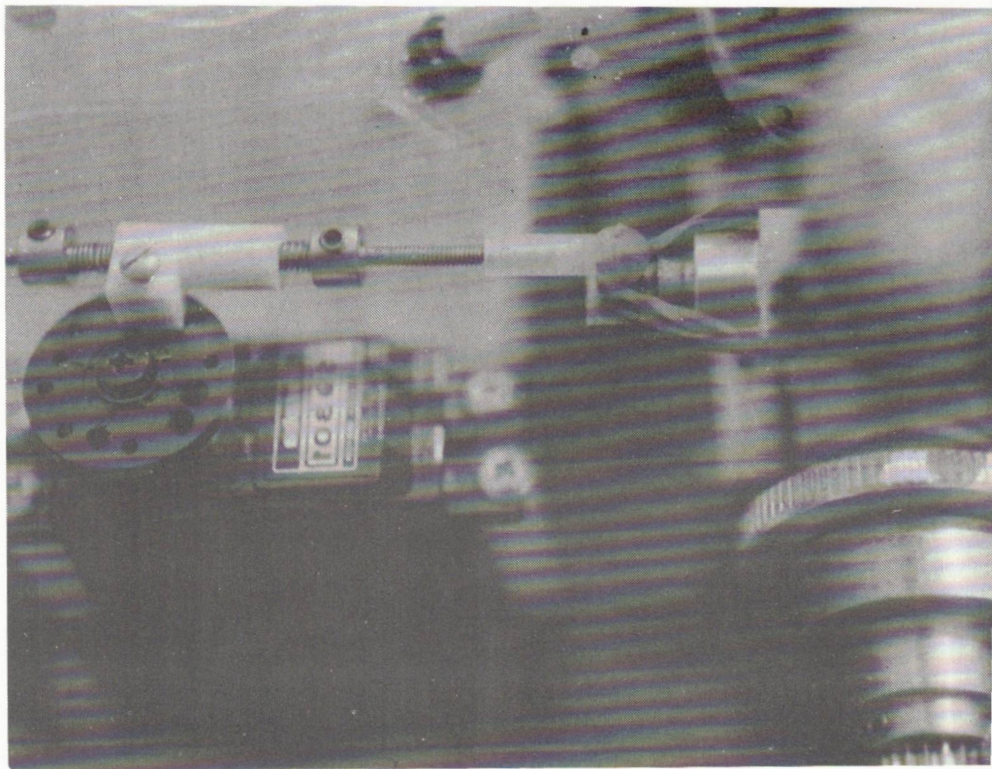
There's little argument that 1/10 scale gas racing has literally exploded in popularity in 1993. Here in the Midwest the bulk of that has been in the off-road truck area. In other parts of the country, particularly where 1/8th scale gas is already popular, 10th scale on-road has joined the larger scale on many racing agendas.

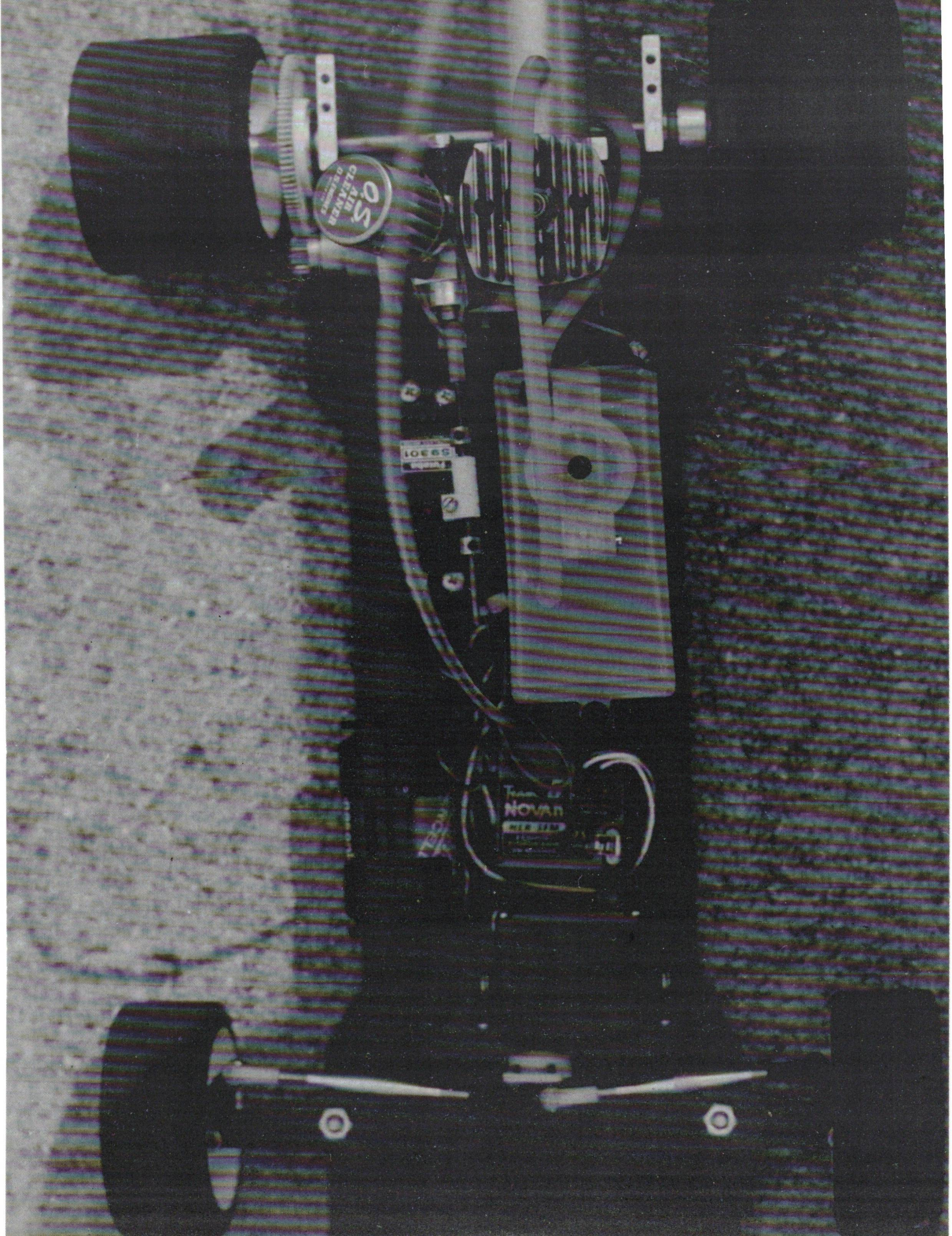
Paying attention to the on-road area for a moment, it seems that the suspension cars are where the competition, and ROAR rules are. Still, being a person who loves to have fun above all else, the Duratrax GT-10 looked to be more fun that I could pass up. While you can find a line of competitive Duratrax equipment, I certainly think of them when I think of making fun affordable.

The Duratrax GT-10 is a .10

Right: The author found the slide valve carb very responsive.

Opposite page: Overall view of the graphite pan chassis.





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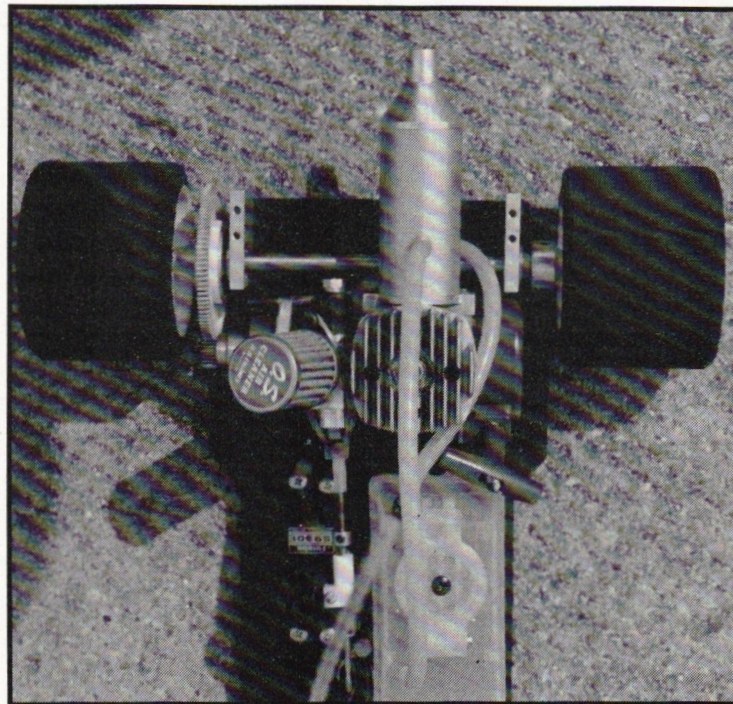
scale pan car of simplistic design, equipped for gas racing. The car is in kit form for those of you who enjoy the building as much as the racing. What I consider this car's major advantage is that it can easily use much of your current 10th on-road inventory. For this project I didn't need to buy a body or tires as I already had a good supply. I tried both a NASCAR body and a GTP type. The GTP type is what you want if you want to do any quick refueling.

The assembly was quick and easy for most of the chassis work. I had one minor annoyance with the kit throughout the process. In many places they use very small phillip's head self tapping screws going into hard plastic. I think many inexperienced builders will strip these screws easily. There is enough ground clearance on this car that you can use just about any type of screw you want so don't be afraid to substitute screws at will.

The steering is done by using "Z" bend rods going to both king pins. My personal policy is to throw out these rods and use adjustable links. I moved over a set of third party links from my 10L with no difficulty. As I said, don't be afraid to adapt or modify when building this kit.

The least expensive configuration of this kit will come with

a pull starter engine. The chassis is cut out so that you can add a larger flywheel to allow for the use of a power assisted starter. Though to do that you will have to modify the brake arrangement as a larger flywheel will interfere with the brake pin. Being a novice in gas myself, I decided to stay with the pull starter.



The kit starts around the engine mounting as well as the clutch/brake assembly. My kit came with a slide carb that in this kit will put the fuel inlet toward the rear of the car. This causes a little bit of difficulty later when it comes time to route the fuel lines. At this point I recommend you look at the picture of the finished product and note the location of the carb to the fuel tank. I drilled a hole a little larger than the fuel line through both engine mounts

(This was done after the car was photographed.) This will allow you to route the fuel line directly to the tank and avoid the exhaust and the clutch assembly.

Speaking of the clutch assembly, this is one of the simpler designs I have seen using two cork shoes. While building it I was skeptical of the simple design, but I will skip right to the results and say it works well.

Many gas cars are available with two or more pinion gears. This car uses a differential that is built around the Magic Motor Sports "insta-diff." Team that up with slotted engine mounts you can make easy gearing changes. Again, this is another area where you probably can make use of your existing .10 scale equipment.

Next came the only part of the kit that might be of concern to novices. (At least the ones without their own set of taps.) You will be required to drill and tap a hole on the exhaust that is needed to pressurize the fuel tank. Thread lock is needed on these fittings as they will be exposed to much vibration.

Also worth noting is I used the O.S. 12 engine. This is a popular engine used by many products. One of the first acces-

The OS .12 engine here is featured with the optional "mini" performance pipe.

sories many racers will try to use is the Tuned Pipe kit specifically for this engine as offered by Duratrax. In this application it won't fit. The header will put the pipe right where the rear wheels will be. Dura-Trax does have a "Mini-Performance" pipe that did work well. The mini-pipe will also vent your exhaust further out the rear of the car, which will please you concourse types.

The rest of the kit is very straight forward. The only change I made was I used bearings in place of the supplied plastic bushings on the front wheels. (I do however suggest you invest in one of those foam front end protectors for this car as the speed of this car will get you into trouble eventually!)

The popularity of gas racing has made some parts tough to find. The OS .12 engine has become hard to get. Receiver battery packs have also been hard to find. But, knowing our suppliers and dealers, I'm sure they are adapting. For this review I simply used the 4-AA pack that comes with most radios.

This isn't quite as neat an arrangement, but this car has plenty of room so I made do.

For radio equipment, I have been using a Futaba Magnum FM radio for sometime now. It is definitely the next step up for those of you still using AM. Nothing special is needed with this kit for servos. I used the standard workhorse of the Futaba line, the S-148 for steering. I'm sure most of you have several lying around that came with your radios. This is a good place to use them. Both the throttle and steering mechanisms are light and exhibit very little friction so most any servo should work well.

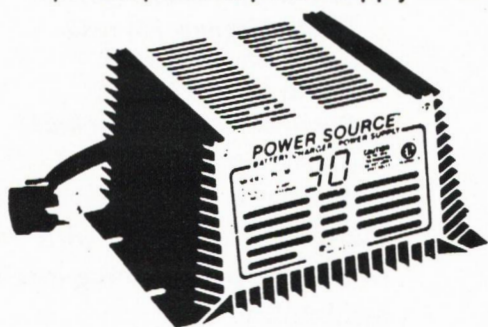
Novice gas racers, as opposed to electric racers must employ a reverse learning curve. An electric racer typically installs a working electric motor and then learns how to care for it once problems develop. With a gas engine, you need to get a good understanding of the process and do a considerable amount of work to get the engine running properly before the first run.

For my gas advice I turned to CompuServe's Modelnet forum, which is an electronic bulletin board whose members cover a vast amount of racing and RC experience. Among the forum's most active nitro advocates is Paul Lindewall who helps to run one of the most prominent gas clubs in the eastern states. If you want to see nitro racing at its finest, look for the TRT patch and flag at most major gas on-road events.

Paul stressed the importance of breaking in the engine correctly and proper fuel selection. Most car novices grab whatever fuel their hobby store has. Frequently that is fuel meant for model airplanes. This fuel lacks the lubricants needed for the hotter car engines. Paul's TRT team uses the Blue Thunder fuel from Duratrax for its consistent performance. I think this is a good combo with the Duratrax car. Paul also noted that I had neglected to put a rubber band on the car's throttle linkage. This simple addition, which is required in most racing locales causes the throttle to return to

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With everything in place, the time for fun was at hand. With the arrangement of the pull starter, glow plug and fuel tank you have to pull the starter at an odd angle. I skinned my knuckles a bit before it fired up. It didn't take much adjustment to verify that the brake was working (Note: I removed the brake shoe in the photographs so the various drive parts could be seen clearly.) and the new neutral setting was where it should be. A couple of shots at the throttle and I could see the clutch was working well.

I made the first few jaunts around the street in front of my house without a body on the car and a few neighbors peeking out to see what the noise was. My first perception was how much control the slide valve carb gives you. It is truly a variable control that can't be equaled in electric racing. Next, I was impressed with how well the brakes

worked. I could imagine charging full out and braking hard into a turn! Without the body this light car really wasn't sticking with its unprepared tires on a rough neighborhood street.

My second try at the car was a little more realistic. I put on a Lumina body and treated the tires with some traction fluid and raced on a brand new asphalt parking lot. The car, using standard green dot tires showed a surprising amount of stick to the road as I negotiated some obstacles I set up. I could get it to push badly when on a high speed turn. This first extended run (20 minutes) gave me the perception that it might make a good road car and a banked oval car. For a flat oval, you will probably do some work to get the car loaded properly. With the GT-10s simple design, I'm sure it can be done.

CONCLUSIONS

The GT-10 is easy to build in its simple design. Its versatility will appeal you tinker type of racers. 10th scale road racers probably can make use of your

existing hardware and experiences. The car equipped with a .12 engine is capable of speeds that will astound you. I think this car will also appeal to the model airplane enthusiasts who would be able to "play" on the ground while taking a break from the skies.

PROS

The simple pan car design uses many standard parts and will be simple to maintain or modify. Parts should be easy to find through most standard sources.

The car is extremely fast and fun. The car will be a positive experience for those making their first nitro venture.

CONS

For the racing enthusiasts, This car doesn't meet ROAR .10 scale gas specs. While this division of RC racing is still young, most racers are using the suspension cars built by Serpent and BMT. Many may not let you race with these other cars. However, many clubs will race whatever shows up. But, if you have a couple of friends with the same car, I will give you my personal guarantee of a good time.

OPTIONS AS TESTED

OS .12 Engine
Duratrax wheel bearings
TRC steering control rods
Futaba Magnum FM radio
Novak 3ch FM receiver
Trinity traction fluid
Duratrax heatsink motor head
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The 1/8th Scale Sprint Car Nationals *At Monee Raceway*

The 1/8th scale Sprint Car Nationals was held on July 16th, 17th and 18th at Monee Speedway in Monee, IL. Owned by Roy Moody this indoor track houses the scale equivalent of a 1/3 mile dirt track, with slightly banked straight-aways and approximately 15 degree banking in the corners. With large doors in several locations, this facility allows an outdoor flavor without the sun drying the track surface and wilting the participants! A large attached area for pitting, Auto-Count scoring, and a smooth clay surface, make this a great place to race...all year round.

This was the 11th annual version of the Sprint Nats, all hosted

by Mr. Moody. This race is the crown jewel of both an individual summer and winter series in the midwest, which also includes tracks in Toledo, OH, Oreana, IL, and Lansing, MI. This race provides an opportunity for the best in the midwest to take on other racers from across the nation to prove who is the fastest, in both the USAC (no wing) configuration, and the World of Outlaws (with wing) style. Participants from as far away as West Virginia came to compete, get to know each other better, and most important, have fun racing!

July 16th was an open day of practice, and most competitors came to try their cars and find

the right tire and chassis set-up for this track. With the USAC event leading off on the 17th, this configuration saw the most action. Some racers had never run their cars in both configurations, so they had to learn both the track, and a new way of running their cars. Some hardcore racers even had separate cars for each class. While the track was open until almost 10 P.M., many racers left early to go watch the full scale sprinters run at nearby Santa Fe Speedway in Hinsdale, IL. The World of Outlaws were there and put on their usual good show, with Andy Hillenburg, Steve Kinser, and Dave Blaney running one-two-three in the feature.

THIS MONTH IN RACING

Saturday morning saw USAC racing in earnest, with single car qualifying to seed the heats after two hours of free practice. Three rounds of three qualifying heats yielded two cars from each heat to the feature. The remaining three spots open in the feature came from two consolation races and a semi. A tough, long road to the feature! Fast time in the single car qualifying went to Brad Pugh from the Decatur, IL area. Brad ran a 6.19 lap with his T-Craft car, and backed it up with a 6.21 from his best-of-four laps effort. Terry Camfield from Oreana, IL also had a 6.19 lap with his T-Craft car but his 6.32 back-up wasn't quite as quick. Terry builds the T-Craft chassis which some of the drivers were using at this event and also owns the track in Oreana used in the midwest series. Roy Moody took his Moody car to the number three spot, with a 6.40 lap. Roy originated the 1/8th midwest series for sprinters and besides building the Moody Sprinter, used by many competitors, manufactures components used by every racer at this event. A busy guy! Lap times for single car qualifying ran from a 6.19 best to a 7.75 worst.

The "A" heat moved two cars to the main, Brad Pugh and John Luckenbill. These two guys

travel together and always race each other hard. Brad's best was a 38 lap effort in 242.58 seconds, coming in the last round. John's best was a 38 lapper in 246.7 seconds coming in the first round. The "B" heat sent Terry Camfield and Jim Boehmer to the feature. Terry's best of 37/241.5 came in the second round. Jim (from Crown Point, IN) also ran a 37 lapper in 241.7 seconds, and it came on the same round! One of the closest heats of the weekend. The "C" heat brought two strong runners from the Chicago area, Roy Moody and Greg Zielinski. Again, both of their best times came in the same round, the second, as they pushed each other to a good effort. Roy's 38/245.0 just edging Greg's effort of 38/245.6. Six fast and well-matched cars for the feature!

The two consolation rounds brought nine cars to the semi and only three of them would get to run again! As it was, the three transfers had all but one guy covered, Jim Clancy falling one lap short. Brian Koopman of New Lenox, IL was the winner, turning a 45 lap effort in 304.1 seconds in a car of his own design. Second went to Steve Lazarus from Lake Zurich, IL taking his Moody car to a 44/302.4. Diane (Moody)

Kaffka used one of Dad's cars to make the last transfer spot, with a 43/300.9. At last the stage was set.

Nine cars makes for lots of traffic, and some drivers did not survive to finish the race. Three cars that did, however, raced wheel-to-wheel for the entire six minutes and the outcome was not decided until late in the race. John Luckenbill, Jim Boehmer and Brad Pugh, all gave it 110 percent and John managed to put a lap on the other two to

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THIS MONTH IN RACING

secure his victory. His 55 lap effort in 363.4 seconds was just a little better than the rest. Jim, who led early, needed a second and a half to hold off a charging Brad Pugh late in the race as his 54 laps were completed in 362.5 seconds, versus the 363.9 used by Brad to get to 54! Steady Roy Moody was only one lap back awaiting a mistake by this crew, and finished with a 53/364.9 for fourth. Diane Kaffka dodged the traffic for fifth, while Terry Camfield motored a broken car to sixth, after challenging early. Damage slowed Brian Koopman and Steve Lazarus for seventh and eighth. A lost transponder from an early tumble relegated Greg Zielinski to ninth after what appeared to be a top three

finish. So, the USAC day was complete and all went home to rest, and prepare for the Winged activity on Sunday.

Sunday saw some additional competitors and with the wings, increased speeds! The format was similar to the USAC event, and single car qualifying led the program. Brad Pugh was again the fastest, and he broke the six second range with a best of 5.95 seconds. The only other competitor in the fives was Greg Zielinski at 5.97 seconds, John Luckenbill and Terry Camfield were close behind at 6.03, and 6.05 seconds. Lap times in the single car with Wings ran from a best of 5.95 seconds to a worst of 7.83 seconds.

With single car lap times seed-

ing the heats, another three rounds of three heats got underway. Increased traffic, and faster cars did not make for a great increase in heat times, but some were quicker. The "A" heat saw the two quickest rounds of the day with Terry Camfield and Brad Pugh pushing each other to their best times in round three. Terry cranked off the only 40 lap effort of the day in 244.3 seconds. Brad was one lap back at 39 laps in 243.8 seconds. Terry also had the best heat times in the first two rounds with two 39 lappers and appeared to be the man to beat in the feature. The "B" heat saw Greg Zielinski and Jim Boehmer with the two best times, and a ticket to the feature as well. Greg's best came on round two with a 38 lapper in 240.6 seconds. Jim saved his best for round three and was close behind with a 38/242.4 time. The "C" heat saw John Luckenbill and Brian Koopman make the direct transfer with John's 39/244.3 coming on round one, and Brian's on round three, with a 38/241.2. Six cars to the feature and a battle for the three remaining spots!

The two consolation rounds brought eight cars to the semi this time, and while only three cars could transfer, five guys got very close! Rich Durnell was the quickest, and his 46 lap effort in



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THIS MONTH IN RACING

306.2 had everyone covered. Lynn Camfield (Terry's son) also made his first feature with a 45/302.3 time, fine effort at a tough race. Third was the position that saw a good battle between Rick Sosong, Steve Lazarus and Joel Mabus. These guys battled the entire round on the same lap and kept it clean the whole way. Joel was the first to yield, running out of fuel on the 41st lap, perhaps paying the price for too much horsepower. Rick and Steve battled to the end, with Rick handling the traffic a little better, and pulling out a four second advantage at the end, finishing with a 44 laps in 300.1 seconds, besting Steve's 304.2. So, the field was set for the feature!

With the feature set, it's interesting to note that one individual in this group has made every feature at every nationals event held—twenty-two features in a row—Greg Zielinski. Quite a record! Greg obviously understands these cars, drives well, and, is very determined. Congrats to Greg, on a record which I know means a lot to him, his family, and the 1/8th sprint car community as a whole.

With the stage set for the last race of the weekend, tension was high, and the adrenalin was flowing. Predictably, this feature saw more contact than the USAC

event and more action! Jim Boehmer, Rich Durnell and Brad Pugh all fell out early, due to contact with the walls or other cars. Lynn Camfield and Rick Sosong battled for fifth with Lynn prevailing by two laps over Rick's 40 lapper. Brian Koopman had a fairly lonely race, not quite on the pace of the leaders, but faster than the rest, as his 45 lap effort carried him to fourth in this five minute race. Terry Camfield, Greg Zielinski, and John Luckenbill were the three cars which battled for the lead and traffic played a role in the outcome. Terry's set-up appeared just a little better, allowing him to run both a high and a low line, and once he was able to gain a lap lead he didn't look back. His 49 lap effort was two better than the rest. Greg and John battled to the end, through traffic, with Greg pulling out a three second advantage for second place. He and John both completed 47 laps.

So, the eleventh annual 1/8th Sprint Nats is history. Thanks must go to the Moody family for all their efforts in hosting this race. Each competitor took home a T-Shirt commemorating the event and all those who made the feature...a very nice trophy. Roy and Roberta Moody also cele-

brated their 40th wedding anniversary at the track on Sunday and provided cake for all the competitors! Congrats, and many more! They have made 1/8th sprint car racing a reality and allowed many of us to enjoy a great hobby.

Race Results

USAC Feature Results:

- 1st - John Luckenbill
- 2nd - Jim Boehmer
- 3rd - Brad Pugh
- 4th - Roy Moody
- 5th - Diane (Moody) Kaffka
- 6th - Terry Camfield
- 7th - Brian Koopman
- 8th - Steve Lazarus
- 9th - Greg Zielinski

Winged Feature Results:

- 1st - Terry Camfield
- 2nd - Greg Zielinski
- 3rd - John Luckenbill
- 4th - Brian Koopman
- 5th - Lynn Camfield
- 6th - Rick Sosong
- 7th - Jim Boehmer
- 8th - Rich Durnell
- 9th - Brad Pugh

Main Winners:

- 9th - Greg Zielinski
- 8th - Steve Lazarus
- 7th - Brian Koopman
- 6th - Terry Camfield
- 5th - Diane Kaffka
- 4th - Roy Moody
- 3rd - Brad Pugh
- 2nd - Jim Boehmer
- 1st - John Luckenbill

Eighth Scale Gas Sprint Nationals— Outlaw Division

Main Winners:

- 9th - Brad Pugh
- 8th - Rich Durnell
- 7th - Jim Boehmer
- 6th - Rick Sosong
- 5th - Lynn camfield
- 4th - Brian Koopman
- 3rd - John Luckenbill
- 2nd - Greg Zielinski
- 1st - Terry Camfield

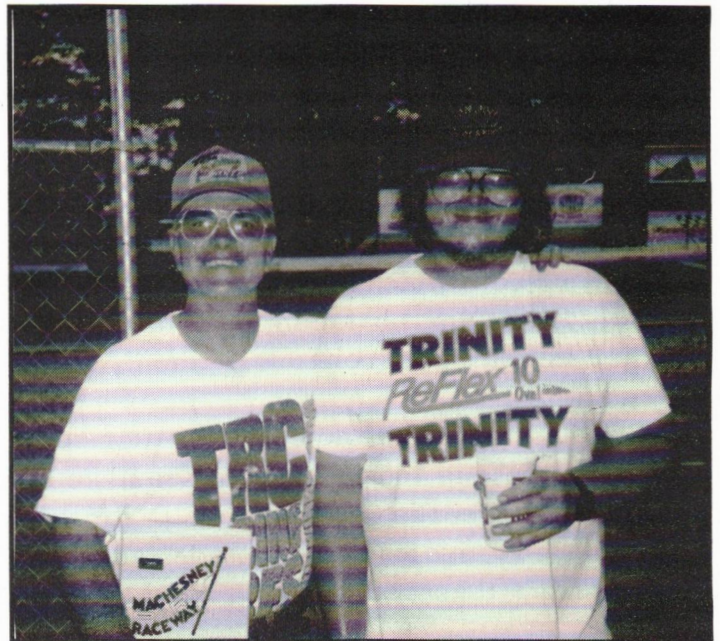
ROAR Region 5 1/10 & 1/12 Paved Oval Champs

By Linda Christen

Heat, humidity, rain, body rule protests, and poor sportsmanship were all part of the ROAR Region 5 1/10 and 1/12 Paved Oval Championships held July 16-18, 1993, at Machesney Park Raceway, Machesney Park, IL. But, in spite of it all, the weekend presented some exciting moments and great racing.

Turnout was disappointingly low, but the competition was fierce. Where were you Region 5 racers? It was too bad that NORRCA Regionals were held the same weekend.

It was unusual that there were more modified entries than stock, but only a few. There were only five entries in 1/12 scale, and they all ran stock. Only one driver was interested in running *Chris Schneider and Jim Dieter (right) provided some exciting racing in 1/10 modified.*



THIS MONTH IN RACING



in an Enduro, so alas, there was none.

Racers began rolling in Friday, staking out their pit areas for the weekend event. Registration and practice officially began at 12 Noon. Stock entries were given Trinity Green Machines as the handout motor.

Saturday morning, racers arrived to threatening skies and everyone held their breath, hoping all three rounds of qualifying would be completed. After a brief driver's meeting at 10 A.M., heats were posted, and Round One began.

In 1/10 stock, Scott Murphy was the man on the move, turning in a great run of 37 laps in 4:04.09.

The top drivers in the stock class are pictured above. To the right we have the 1/10 modified A-main. Both of these photos have drivers missing because many left quickly due to rain.

Jay Stoltz was right behind him with 37 laps in 4:05.19. Modified drivers Jim Dieter and Chris Schneider provided some exciting qualifying. Dieter cranked out 42 laps in 4:05.18 with Schneider finishing close behind with 42 laps in 4:05.31. Ralph Duncan was TQ in 1/12 stock after round one with 44 laps in 5:03.55.

With the wind picking up and the sky looking dark, race one was called to the line for round two. Just as that first race was completed, Mother Nature turned against us and it started to rain. Drivers received lots of extra time

to work on cars, fine-tune motors, nap or chit chat. Qualifying resumed around 4 P.M.

Scott Murphy remained on top in 1/10 stock. Unfortunately, in this round, a racer was denied a good run by two fellow drivers who plotted on the driver's stand to take him out. Everyone wants to



THIS MONTH IN RACING

run a clean qualifier, but accidents will happen, usually caused by poor judgment, impatience or over zealous driving. However, it is an entirely different matter when action is so blatantly exhibited against another driver. There are ROAR rules regarding rough driving, but action is hardly ever taken...probably because it is so hard to tell what is intentional and what is accidental. However, in this case, a protest was made to race officials, and veri-

fied by other witnesses. The drivers involved were warned but no penalties were served. I have witnessed this type of behavior at major events in the past, and have wondered if a race official on the driver's stand would make a difference.

Chris Schneider challenged Jim Dieter's TQ position with a super run of 42 laps in 4:05.74, but Dieter held the pole position. There was a change in TQ for 1/12 stock as Paul Ruskowski turned in a 45 lap run in 5:05.91.

Round Three saw another stock driver join the 37 lap club as Jeff Gundlach whipped them out in 4:05.09. Murphy bettered his time with 37 in 4:00.85, as did second place Stoltz with 37 in 4:02.91. Chris Schneider edged out TQ Dieter with a great run of 42 laps in 4:04.19. Paul Ruskowski remained TQ in 1/12 stock.

At the end of qualifying, racers were called to the scoring stand for a brief driver's meeting. They were informed that many of them were running illegal bodies. The rule, officials pointed out, pertained to the side profile. It seemed many racers rounded off or curved the back of the body instead of cutting it straight across and then up (at a 90 degree angle). Many thought this to be a little

ridiculous, especially since three rounds had already been run. But, officials stood fast that bodies not properly cut would not be allowed to run.

Rules are rules, but if you are going to enforce one then they all should be adhered to. It was obvious some racers were running very low to the ground, probably because the body was cut above the trim line. When a 4 1/2 inch template was presented to tech to measure the height of the cars, ROAR Region 5 Director, Bob Schoenau, threw it out saying it couldn't be used as a guide since everyone wasn't running the same size tires.

Racers arrived to a wet track and soggy pit areas on Sunday as a big storm rolled through the area early in the morning. The last round of qualifying was delayed as the track was dried. Race officials figured a three to four hour window for racing before the next storm was due. So, everyone was anxious to start racing. The heats were resorted according to yesterday's best times for qualifying today.

The 1/10 stock class saw no change after round four. Scott Murphy held on to the TQ position. Jim Dieter was fast as lightning as he snatched back the TQ spot with a great run of 42 laps in 4:00.59. In the 1/12 stock

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THIS MONTH IN RACING

class, Paul Ruskowski stayed on top.

During the break before the Mains were run, door prizes were distributed to all racers. Many thanks should go to all the RC manufacturers who donated products.

The lower mains were run first, building to the A Mains. In the A main 1/10 stock, TQ Scott Murphy took the lead off the start and he never looked back. The racing for position took place for second through sixth place as Todd Norder, Jeff Gundlach, Jay Stoltz, Jamie Tennies and Tony Christen were so evenly matched. Positions changed several times during the four minute race, their driving excellent and clean. They battled closely until the end of the race. The top three finishers were Scott Murphy, Todd Norder and Jay Stoltz.

In the A main 1/10 modified, Jim Dieter was a rocket off the line, followed by Bob Schoenau and Mike Wood, Jr. It only took Chris Schneider 30 seconds to move up into third, and by the 45 second mark, he was in second knocking on Dieter's door. At the 2 1/2 minute mark, Dieter, pushing his EV10SS to the limit, dove below a lap car in turn one and was parked in the infield. Schneider passed him for the lead and went on to victory. Dieter finished second,

thanks to some fast marshaling, followed by Bob Schoenau.

Ralph Duncan was victorious in the 1/12 stock main, followed by Hugh Holmes and Paul Ruskowski.

Trophies were presented to the winners in the rain. Everyone was quick to pack up and leave before the heavy stuff started.

Gina and Dave always put on a good race and they deserve a big thank you from racers for a job well done. Everyone also enjoyed the great food from their snack bar, especially those killer "Terry" burgers.

1/10 Stock:

A Main

- 1st - Scott Murphy
- 2nd - Todd Norder
- 3rd - Jay Stoltz
- 4th - Jamie Tennies
- 5th - Jeff Gundlach
- 6th - Tony Christen
- 7th - Scott Hooper
- 8th - Eric Meredith
- 9th - John Center
- 10th - Devon Bliss

B Main

- 1st - Guy Brocato
- 2nd - Mike Steinke
- 3rd - Bill Heck
- 4th - T.J. Graczyk
- 5th - Jim Mosley
- 6th - Todd Tribbett
- 7th - Dave Fortmann
- 8th - Jeff Schultz, Jr.
- 9th - Hugh Holmes
- 10th - Craig O'Brien

C Main

- 1st - Jeff Schultz, Sr.
- 2nd - Mark Miller
- 3rd - Orin Sunde
- 4th - Carl Schmeling
- 5th - Richard Hooper
- 6th - Eric Nowaczyk

- 7th - George Mari
 - 8th - Ed Fischer
 - 9th - Pat Hockers
 - 10th - Steve Burton
- #### D Main

- 1st - Paul Ruskowski
 - 2nd - Clint Busch
 - 3rd - Ron Spaulding
 - 4th - Scott Labudde
- #### 1/10 Modified:

A Main

- 1st - Chris Schneider
- 2nd - Jim Dieter
- 3rd - Bob Schoenau
- 4th - Mike Wood, Jr.
- 5th - Ken Pepe
- 6th - Chuck Mactrind
- 7th - John Foister
- 8th - Ken Pohlman
- 9th - Tom Esposito
- 10th - Craig Everets

B Main

- 1st - Tim Sunde
- 2nd - Randy DeBoer
- 3rd - Demetrius
- 4th - James Arnold
- 5th - Mike Lloyd
- 6th - Bill Sullivan
- 7th - Mike Aiello
- 8th - Boyd Crompton
- 9th - Greg Dean
- 10th - Keith Racknor

C Main

- 1st - Ralph Duncan
- 2nd - Greg Greene
- 3rd - Tom Alf
- 4th - Steve Sunde
- 5th - Scott DeYoung
- 6th - Mel Donaldson
- 7th - Nick Rank
- 8th - Ryan Pett
- 9th - Gordie Burnside
- 10th - Kurt Lechel

D Main

- 1st - Mike Wenzel
- 2nd - Shane Winchest
- 3rd - Todd Pfeifer
- 4th - Jim Good

1/12 Stock:

- 1st - Ralph Duncan
- 2nd - Hugh Holmes
- 3rd - Paul Ruskowski
- 4th - Scott DeYoung
- 5th - Sam Busch



THE MAN: Gil Losi Sr. is one of the most internationally famous and respected members of our racing community. The Chief Executive Officer of Team Losi and the father of two equally famous sons: world-famous car designer Gil Losi Jr. and skate-board champion Allen Losi.



THE BACKGROUND: Gil's involvement with radio control racing started in the late 1970's. He was one of the original founding fathers of off-road racing. Active in the original "ORRCA" and southern California series which started it all! He later acquired the Ranch Pit Shop and built this into the finest R/C facility this sport has ever seen. He later established Team Losi and currently manufactures what many consider the finest products in the R/C industry.



THE SIMILARITY: Gil is a racer just like you! He became involved with radio control because his son's loved the sport and this was a way he could spend more time with them. R.O.A.R. needs this family attitude back. We feel Gil can restore this presence and understands our needs and wants!



THE INTEGRITY: At this year's IFMAR off-road World Championships even though Team Losi had an incredible edge with their newly introduced HYDRA DRIVE CLUTCH, Gil chose to give this edge away to his biggest competitor. Why? Because he believes in a "level playing ground" where the drivers should all enjoy themselves and let the best man win! How many manufacturers would do something like this for the good of the sport? Not many! It is a far cry from the Australia 2.2" tire debacle!



THE DREAM: To restore R.O.A.R. to all it's former glory. To build the membership and allow people to once again enjoy their support. He plans on doing this by working "WITHIN THE SYSTEM". He wants to eliminate the power struggle in R.O.A.R. and create a level playing ground equal to all members and manufacturers. He will bring a racer and a businessman perspective to R.O.A.R. This combination especially in our new economy is sorely needed!



THE REASON: Gil knows the "in-house" fighting between manufacturers must cease. He welcomes the opportunity to work "within the system" to build R.O.A.R. not use it for his own personal gain as others have done in the past. He wants to work with the newly-elected president Robert Morgan and the executive committee to bring change as well as stability to the membership. He understands that his purpose in R.O.A.R. is to work for the members, not inflict his own personal viewpoints on the membership regardless of their wants as past vice-presidents have done! With Gil Losi as vice-president a "stability" can and should be returned to R.O.A.R. The strength, integrity and honesty of this candidate is needed for our industry to survive and grown in the 90's. The choice is clear: Vote Losi: The honest choice!



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The Honest Choice

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GIL LOSI SR.

For ROAR Vice President



THIS MONTH IN RACING

The 1993 JG Dirt Oval Championships

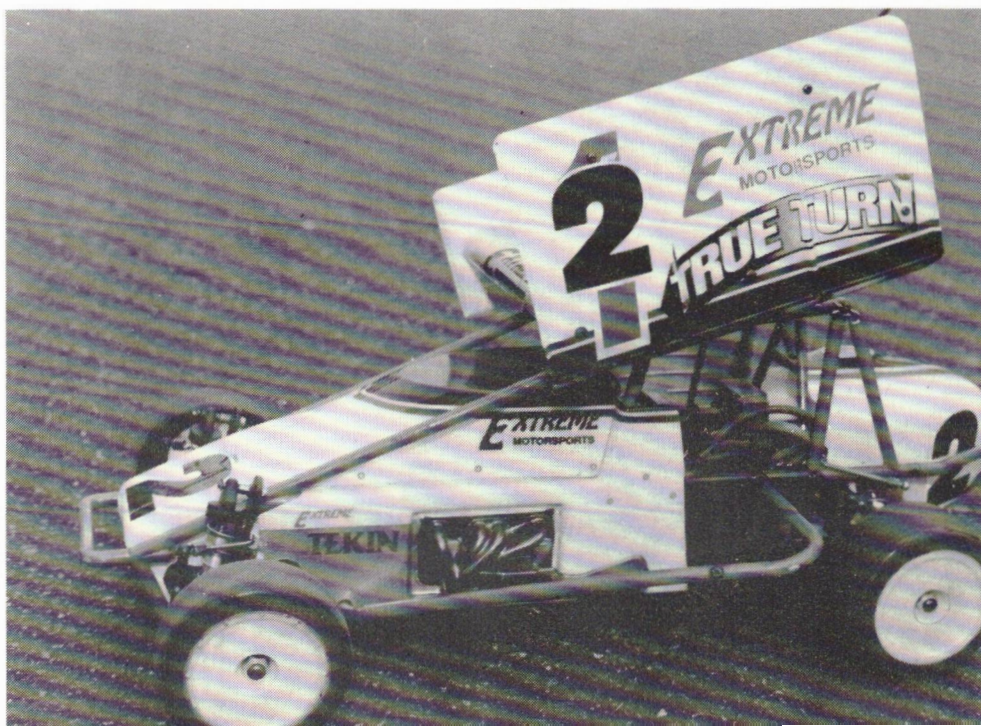
At Racer's Haven

By Jack Simmons

A little later than normal but none the less exciting! This year's J.G. Dirt Oval Championships, the 10th Edition, provided some of the best excitement yet.

In 1983 John Gudvegan started what would become a fixture in dirt oval racing. This annual race attracted the best that the sport had to offer. In years past, many "cross-over drivers" tried their hand at the dirt oval scene. Team Trinity's

The Tenth Annual JG Oval is a race that sees all the top oval drivers in the country turn out.





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2

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THIS MONTH IN RACING

Jim Dieter made the pilgrimage out to the race for a few years. It was at this race that he became known as one of the toughest dirt oval drivers around. It was also at this race that his fledgling two wheel drive racer became fine tuned and perfected. Today, it is known as Trinity's "Reflex" car. With a firm grasp of the history of this race, the top oval drivers in the country once again flocked to the "J.G.Oval".

There have been two sites where this race has been held for its ten year length; the famous "Ranch Pit Shop" and "Racer's Haven". This year, the race would once again be held at the ultra fast Racer's Haven track in Bakersfield, CA. This facility rivals any other for its modern conveniences,

track condition and quality race management team.

Racers have come for this race from many different locations over the past years. They have come from all over the U.S. This year was absolutely no exception. The introduction of a 1/10th gas truck class sparked the interest of Ernie Guzman. He rounded up his family and flew the 3,000 plus miles from Hawaii!!!

Ten different classes were run and double "A" mains were used at this year's J.G. For this reason it is just not possible for a thorough documentary of each and every bit of action. There were some highlights though that stood out and ought to be mentioned.

David Potter once again dominated qualifying

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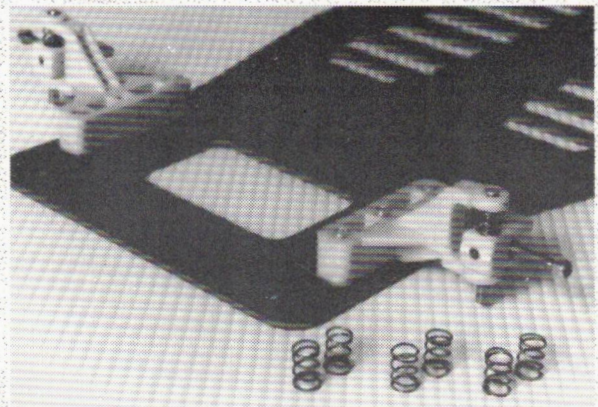
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THIS MONTH IN RACING

in the 2WD modified class. His home track advantage truly has shown through in recent years. It has been a very long time since he has been defeated at this venue. In a very controversial race, Sean Young managed to spoil his winning ways. In the first of the two mains, David was wrapped up by a backmarker. This handed the lead over to the hard-charging Sean Young. Sean drove a smart race and held on for the win. David finished in the fifth spot. In the second A main, Sean got the whole shot and started to drive away from the field. As he caught up with some back markers, he drove cautiously. David did not!! David showed some blinding speed and fearless moves through traffic and went by Sean for the lead of the final main. Sean, knowing that all he needed to do was finish second to win, settled into a good groove and finished out the main in second. This gave

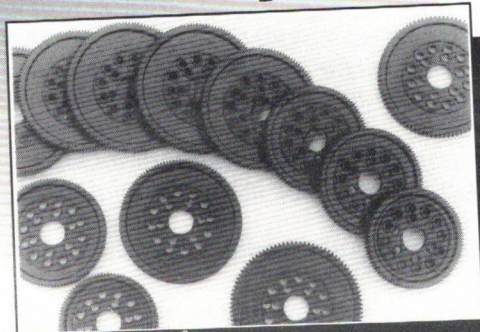
him the win and allowed David to take the second spot. Consistent finishes gave Marcos Aribas third.

Four wheel modified was billed in many ways as the Curtis Strawn show. He unveiled a brand new car for this event. It was a race that he obviously wanted very much to win. His new car strutted its stuff well in qualifying. He took an uncontested pole for the event. After winning the first of the two A mains, his bid for a fifth J.G. title went the way of the wind. Shortly after the start of the second A, Curtis had trouble passing a car in turn two. The car pushed Curtis up into the wall and broke Curtis. This gave the lead of the race to Matt Spivalo. Because Matt broke in the first race, the over-all win went to Russell Hodak. Russell's two-second-place finishes allowed him to take the crown.

Not a single modified TQ won

the over-all title. This was true again in the expert modified sprint class. Jack Nicholson was the class of the field in qualifying. He posted the top time and seemed to have a great shot at winning the whole event. Rob Russell and a host of others had another idea. A first lap tangle relegated the top qualifiers to the back of the pack in the first A main. Rob Russell shot out into the lead and stayed the same until the end of the race. The second A main was much the same. Rob took advantage of his pole position start, thanks to his win in the previous race. He out-dashed John to the first corner and sped away. About three minutes into the race, Gianni Boccoleri began to take advantage of Rob's difficulties in traffic. He caught and passed Rob under some of the most impressive traffic pressure that could be imagined. Gianni put ground between himself and Rob and

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THIS MONTH IN RACING

took the main win. Rob's second place secured the overall win. Gianni's win in the final A gave him second overall. Long time racer, John "The Hammer" Smith rounded out the top three.

In the stock sprint class, Gianni got his revenge. He not only was the top qualifier, but he ran away with the win. A great battle in the second race developed throughout the entire four minute race between

Dennis Eckert and Jerry Winkelbauer. Dennis led all the way up to the 3:50 mark. The crowd was going nuts. For most of this time, Dennis was forced to block every pass attempt that Jerry made. With ten seconds to go, Jerry finally decided that he only had one way to get by Dennis. On the front straight, Jerry bumped Dennis just a bit. This made Dennis get off of line and allowed Jerry to speed by for the second position. As it turned

out, points for both Jerry and Dennis put them in a tie for second. The breaker is a combined time over the two races. Jerry won this by a mere 1.5 seconds! What a finish.

Once again...the crew at Racer's Haven put on a great show. With consistent and fair treatment, this track has become one of the most highly regarded and professional facilities in the Nation. Great job Martin Buchanon and crew!

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Twister is pleased to announce the availability of our new bushing motor commutator lathe. It is available as a complete lathe or as an adaptor kit to be installed on any existing Twister Mini Lathe. Most bushing motors are crimped together and cannot be disassembled for armature repair so they are usually thrown away when the comm is too worn. The bushing lathe is designed to retrue these motors without removing the armature. A special diamond tipped cutting bit must be used.

To cut a commutator the brush holder is first removed or swung back out of the way on one side of the end bell. This is easily accomplished with Yokomo style bushing motors but other types of motors may require the purchase of special replacement screws to enable disassembly of the brush holder. These screws replace the old spring holder and will be available from Twister. The motor is then installed in the lathe and trued with the special diamond.

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Racing for 1/10th and 1/12th cars. Indoor carpet and oval course. Racing every Saturday night at 6:00 p.m. (also off-road - call). 1/10th scale off-road racing every Sunday at 2:00 p.m. (call for oval races). Track is at 2600 Beltline Rd. Decatur, AL. (205) 353-3399

ARIZONA

HOBBYTOWN U.S.A., PHOENIX
Racing for 1/10 scale asphalt oval every Sunday at 1:00 p.m. at "Bell Canyon" Pavillions. Located at 2814 W. Bell Rd. Phoenix, AZ 85023. Phone (602) 993-0122.
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CALIFORNIA

ALISO HOBBIES

Racing every 1st & 3rd Sun. of the month at 8:00 a.m. All types of cars and trucks welcome, but no gas cars. Entry fee is \$4 for the first class, and \$3 for each additional class. Track is in the parking lot of Aliso Hobbies, 27311 "A" La Paz, Laguna Hills. (714) 831-3839.

R/C OFF-ROAD RACEWAY

1/10 indoor off-road racing. Call for racing schedule and date information. Jeff Paul at (714) 965-9615. Track is located at 10810 Talbert Ave, Fountain Valley, CA 92708.

OUTLAW MOTOR SPEEDWAY

1/4 Scale Dirt Oval every first and third Saturday. 1/10 scale: Tues. Tamiya Off-Road, Thur. Off-Road & Dirt Oval, Fri. 1/10 and 1/12 on-road, first Sunday Dirt Oval, second Sunday 1/10 & 1/12 On-Road, third and fourth Sundays off-road. 7920 Webster, Highland, CA, (714) 864-1770.

THE RANCH PIT SHOP

1/10 Scale: Every Wednesday night at 6 p.m. Alternating Oval and Off-Road. Every fourth Sunday 1/12 & 1/10 on-road combined program. 1655 E. Mission Blvd., Pomona 91766, (714) 623-1506.

SMR/CRC

1/8 Scale & 1/10 On-Road: First Sunday of each month at G.I.A.,

1660 Stewart Street, Santa Monica, CA. Sign-up 8:30 a.m. For more info call Glenn Williams (213) 734-7888, Chris Chan (213) 393-3735, or Tom Wong (213) 821-5472.

REECE'S R/C RACERS

1/10 Scale: 1st & 3rd Sundays at Spinner's Airport Raceway, 2nd & 4th Saturday's at Reece's R/C Racers, (209) 784-0922.

SROKA'S INDOOR R/C

1/10 Scale: Every Sunday - Oval racing every 4th Sunday. 5216B Arboga Rd., Marysville, CA 95901. Call Michael or Vickie Sroka (916) 742-6148 or (916) 741-3051.

HOBBY HAVEN RACEWAY

1/10 Scale: 1756 First Street, Livermore, CA 94550. For further info call (415) 443-5828 M-F 10 a.m. to 6 p.m.

FAST LANE R/C

Address is 25845 San Fernando Rd. #21, Saugus, CA 91350. Contact John or Darlene at (805) 255-2404. Racing is off-road, dirt oval, asphalt road course and asphalt oval.

SONOMA COUNTY RACEWAY

1/10 Dirt Oval, 1/10 Off-Road, 1/10 & 1/12 Asphalt: 806 Brookwood Avenue, P. O. Box 9565, Santa Rosa, CA 95405. Mark White (707) 571-7565, Schedule info (707) 571-8044, Competition Products (707) 571-8048.

THE SQUARE ROUNDHOUSE SPEEDWAY

1/10 Scale: Saturdays 3 events per month, Off-Road, Monster Truck Pulls and Oval Race. Oval dirt track and Off-Road tracks. 1468 Lander Avenue, Turlock, CA 95380, (209) 668-4454. Ask for Harold Lindquist.

BROTHERS-IN-LAWS R/C RACING

1/10 Scale Dirt Oval. Racing every Sun. Call Bob (619) 949-5252.

ANTIOCH RACEWAY

1/10th Dirt Oval racing every Friday 7 p.m. All classes. Sat. & Sun. 1/10 dirt oval and off-road 10:30 a.m. Also night racing. 5631 Lone Tree Way, Antioch, CA 94509. Call (415) 754-5700.

R.C. CITY RACEWAY & HOBBIES

Off-road racing every Tues., Fri., Sun., Oval racing every Sat./Practice time and rentals available. Call for more info. (408) 262-3188. 1453 N. Milpitas Blvd., Milpitas,

MOUNT SHASTA R/C RACEWAY

1/10 Scale: Lassen Lane and Smith Road. (916) 926-4717. Home of Cal-Ore Off-Road Championships. 1/10 off-road racing every other Sunday. May through October. Indoor carpet racing 1/10 & 1/12 Nov. through Apr. 826 Pine St., Mount Shasta, CA 96067.

HOBBY HUT

1/10 Scale: 2665 Park Marina Dr., Redding, CA 96001, (916) 241-3737. Off-Road racing. Norcal Mini Off-roaders. Ask for Kevin.

DESERT HOBBIES & RACEWAY

1/10 Off-Road racing 1st & 3rd Sundays. Every Friday 7:30 p.m. 25 min. from San Bernardino, 17210 Main St., Hesperia, CA 92345.

NORRCA (National Organization for Radio Controlled Autos)
331 Mariposa Court, Upland, CA 91786. (714) 981-9641 or fax (714) 981-0527

D & B HOBBIES AND RACEWAY

Off-road Thursday and Saturday, dirt oval Fridays. Special events on Sunday. Call (408) 280-6539, Wed. thru Sun. 2:30 to 6:00.

BOB & JIM'S R/C WORLD

1/10 and 1/12 scale road course racine every Mon., Wed., & Fri at 7:00 p.m. 1/12 and 1/10 scale oval racig on Sat. at 5:00 p.m. For more information call (714) 684-6314. Track is at 3485 University Ave., Riverside, CA 92501.

RC RACING CENTER & HOBBIES

1/10 Scale racing every Tuesday and Friday at 7 p.m. Sunday racing at 10:30 a.m. Indoor track and hobby shop, AC power, auto lap counting and food. Located in San Diego County; 9842 Channel Rd., Lakeside, CA 92040. (619) 443-2270.

VENTURA ROAD RUNNERS

1/10 scale off-road every Friday and 1st Sunday. 1/10th dirt oval every Wed. and 3rd Sunday. 1/10th and 1/12th asphalt road the 2nd and 4th Sunday. 1/10 and 1/12 scale asphalt oval the 5th

Sunday. Freedom Park Raceway, 520 Freedom Pk., CAmarillo CA 93010. Contact Ed at (805) 499-8266 or Less at (805) 484-8920. Sign-ups close at 7:00 p.m. nights and 9:30 a.m. on Sunday.

RAMS

Racing for 1/8 scale cars on the 1st & 3rd Sundays of each month at Murco Plaza (Paseo Padre Parkway & Mowry East) in Fremont, CA. Contact Mike Alton (510) 490-8734.

HOBBY WAREHOUSE OF SACRAMENTO

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S.T.A.R.C.

1/12 Scale: Wed. nite - STARC Club Series. Rockton, Ontario, Canada. Sam Burke (519) 621-5424.

S.O.R.C.R.C.C. 1/12 Scale: Southern Ontario Radio Control Race Car Club in Toronto, Ontario, Canada. Racing alternating Sunday nites Oct. - April Scott Reynolds 298-4941 or Gary Joi 421-9061.

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CONNECTICUT

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1/10 Scale: Panthorn Park, Burrirt St., Southington, CT. Every Saturday May 1st - Nov. 1st. Off-road, oval, Baja, truck pulling. Call (203) 628-9345 Ben Carr, 272-9326 Pete Church, 237-6976 Bob Lavoie, 879-2316 Steve Magnani.

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1/10 Off-Road, from end of April to middle of October. Racing every Sunday weather permitting. Call Mike Belmonte at (203) 661-0145. Track is at Old Field School in Fairfield, CT.

R/C HOBBIES RACEWAY

1/10 Scale: Route 163, Bozrah, CT. Racing every Sunday, May 1 to Oct. 30. For more info call (203) 886-9441, ask for Mike or Bob.

SNORR

1/10 Scale: Racing every 1st and 3rd Sundays. P. O. Box 438, East Haven, CT, (203) 469-2594 or (203) 481-5813, Dave Seales.

BUCKLEY SPEEDWAY

1/10 Scale: 37 Douglas Street, Hartford, CT. Every Sunday April 1st to Nov. 31st. Black top oval. For more info call "Ziggy" or Debbie Kwasnicki (203) 246-4778.

LITTLES HOBBIES

1/10 Scale: Monday - Trucks; Tuesday - Sprint Cars; Sat. - 2WD 6 yrs. to 16 yrs.; Sunday - All classes indoor clay oval and road track fast, Stock & Modified classes. 111 Main St., Tr. 66, Hebron, CT 06248, (203) 228-4942.

CONNECTICUT AUTO RACING TEAM

1/10 Off-Road and Sprint Car Oval. 37 Douglas St., Hartford, CT 06114, Zig (203) 246-4778.

K & M R/C SPEEDWAY & HOBBIES

1/10 Scale: 735 Canal St., Stamford, CT 06902, (203) 967-7255. 7,000 sq. ft. complex, ample pit with power, fully stocked hobby shop. Organized racing held weekly. Call for details.

EAST LYME R/C KAR KLUB

1/10 Scale: Every Sunday starting May 20 thru Sept. Racing at 11 a.m. Located at Society Rd, East Lyme, CT (Behind the Junior High School). For info call Paul Johnson, 739-4070 eves. or weekends.

NERCAR

Racing for 1/8 and 1/10 gas on road. For info call Phil (203) 627-5410; Larry (203) 749-6281; Wes (203) 749-6281. Enfield, Conn.

COLORADO

QUEEN CITY R/C RACEWAY

1/12, 1/8 and 1/10 scale cars. Every Fri. 7 p.m. Open class. Every Sunday drag racing. 5050 S. Federal Blvd., Englewood, CO 80110, (303) 730-1391.

MILE-HI R/C SPEEDWAYS

1/10 Scale: Thurs. & Sat. off-road; Fri. carpet, Sun. 2 p.m. 178 S. Kalamath, Denver, CO 80221, (303) 722-6766.

R/C WORLD & TRACK

1/10 Off-road & dirt oval racing. Indoor facility. Wed & Fri. - oval. Sat. Off-road. Call Glen or Debbie (303) 789-0838, 2788 S. Federal, Denver, CO 80202.

M.H.O.R. R/C RACEWAY

Indoor 1/10 off-road racing on Wed. & Sat. Complete hobby shop, AC & DC power. For info call Jess Brockman (303) 343-0151 after 3 p.m. MST. 155540 E. Batavia Dr., Aurora, CO 80011, (East on 17th Ave. at Chambers Rd.)

FLORIDA

JAY'S R/C

1/10 Scale indoor carpet oval and road course. 5018 14th Street West, Bradenton, FL 34702, (813) 756-6393, 758-2565, 746-8649.

LOU'S R/C HOBBIES & RACEWAY

Racing on Saturday is at 12:30 for 1/10th scale clay oval. Sunday racing is 1/10th off-road. Both tracks have handicap access. There is computer lap counting, a hobby shop and food available. The track is located at 4931 Oleander Ave., Fort Pierce, FL 34982. Contact Lou at (407) 464-3207.

LAKE WHIPPOORWILL SPEEDWAY

1/10 oval racing every Saturday. Open practice other days. 12345 Narcoossee Rd., Orlando FL, 32827 - (407) 277-9586.

FLORIDA STATE RACE SCHEDULE

August 21 & 22 Orlando (407) 277-8231

September 18 & 19 Orlando (407) 381-0420

October 9 & 10 Largo (813) 535-8683

November 6 & 7 Naples (813) 261-8545

For more information call (407) 631-8771 or Fax at (407) 633-4625.

B & T R.C. CENTRAL

Racing for 1/10 off-road on the 2nd and 4th Saturday. Track at 811

Playground Rd., Fort Walton, FL 32548. Phone (904) 863-2666.
DOC'S INDOOR R/C RACEWAY
Florida's state of the art facility. Plenty of pitting space, slot car track, bathrooms, snack bar and hobby shop. Located at 16803 US 19 N. Clearwater, FL 34624. For information call (813) 538-3096.

GEORGIA

GEORGIA HOBBY CENTER

1/8 and 1/10 off-road and clay oval every Sat. and Sun. at 2:00 p.m. 112 Kenwood Rd., Fayetteville, GA 30214. (404) 460-1753

SILVER WINGS HOBBIES & RACETRACK

Indoor 260 ft. 1/10 scale clay oval. Complete hobby shop, plenty of electrical. Racing Tuesday & Saturday 7:00 p.m. Snack bar on site. 5611 Riverdale Rd., College Park, GA 30346 - (404) 991-2225.

LAKE MAYER RACEWAY

Home of the S.C.O.R.E. 1/10 dirt oval and off-road track. Raceway is located at the Lake Mayer Park, Montgomery Crossroads, Savannah, Georgia. Please call (912) 355-6033.

IDAHO

CAPITAL DIRT BURNERS

Racing for 1/10 dirt oval and off-road every other Sunday at Fort Boise. For schedule call Mike (208) 345-3906 or Jim (208) 383-0426.

ILLINOIS

MACHESNEY PARK RACEWAY

1/4 scale, and 1/10 scale: Large asphalt oval racing alternating every Saturday and Sunday April thru October. 1220 Shappert Dr., Machesney Park, IL 61111, (815) 282-1311.

R & R HOBBY

1/10 Scale dirt track inside and outside, also 1/12 tracks inside and outside. 1414 N. 24th St., Quincy, IL 62301, (217) 228-1133.

THE INSIDE TRACK

1/10 Scale: Every Wednesday 7 p.m. and Saturday 6 p.m. For more info call (312) 898-5649. 725 Hill Ave., Aurora, IL 60505.

RECTOR'S R/C

1/10 Scale: Indoor dirt oval/off-road. Alternate months. 6 p.m. Saturdays, 2 p.m. Sundays. RR3, Albion, IL 62806. (618) 447-3282.

CARPETBURNERS R/C CLUB

436 East Main Street, (Rear) Danville, IL 61832, (217) 442-7466.

C & C HOBBIES AND RACEWAY

Off-road every Fri. night and Sun. 2081 W. Station St. Kanakee, IL. Call Chris at (815) 935-2600 or Ken at (708) 485-6366.

AMERICA-TRAC SUPER SPEEDWAY

400' center line high bank tri-oval. Large pit area, AC power, close to I-57. Phone (217) 234-8707. RR3 Box 242, Mattcon, IL 61938.

MIDWEST HOBBY TRAX R/C RACEWAY

1/10 scale indoor off-road and oval racing every Friday 8 p.m. and Sunday 10:00 a.m. AMB scoring, AC power, snack bar, full hobby shop. 114 Kirkland Circle - Unit A, Oswego, IL. (708) 978-RACE.

EAGLE SPEEDWAY AT PONTIAC

1/10 & 1/12 Indoor carpet oval and road course racing held Wed., Sat. and Sun. Practice on Tue and Sat. AMB counter hobby shop, snack bar, etc. 313 N. Plum St., Pontiac, IL 61764. (815) 842-1738

INDIANA

RPM R/C RACEWAY

1/10 Scale Indoor off-road racing every Sunday at 12 Noon. 1112 S. 16th, Elwood, IN 46254. For more info call (317) 552-7758.

R/C RACEWAYS

1/10 indoor dirt oval. Wed. 6 p.m. oval. Fri. 6:30 p.m. Sun. 12 noon oval or off-road. Call (219) 747-6414. 2710 Nuttman, Ft. Wayne,

ARVIN'S HOBBY CENTRE

1/10 Scale: 2,600 sq. ft. carpet track with movable rails so that we

can change the layout from oval to off-road. We run off-road and on-road cars on Sat., Sun., and Wed. 1403 E. Spring St., New Albany, IN 47150, (812) 945-3745.

RACEWAY PARK

Mishawaka, IN (Northern Indiana)

Winter - Large indoor carpet track - two Sundays a month. Summer - The Mid-West's Best Off-Road track - two Sundays a month. Off-road track is on N. Main Street. For info call Bob (219) 256-1020.

HOBBY WORLD RACEWAY AND HOBBIES

Indoor dirt oval and off-road. Racing every Wed. and Sat. at 7:00 p.m. Full hobby shop, AMB scoring, AC power and snack bar. 1508 N. Harlan, Evansville, IN 47711. (812) 421-1100.

RC ZONE & RACEWAY

Located inside the Indy Indoor Sports at 34th & Highschool Road, we feature an indoor carpet track with racing every Saturday - April through October. Rentals available for racing on Friday nights. Full service hobby shop and facility. For more information call Greg or Russ at (317) 290-0067 or write to 6380 W. 34th St., Indianapolis, IN 46224.

GONZO RACEWAY

1/10 outdoor off-road racing on Sundays May thru September. Racing starts at 10:00 a.m. Indoor carpet racing November thru March. Computerized scoring. For more information call (219) 980-8409. 418 Roberts Rd., Chesterton, IN 46304.

BJ'S RIVERSIDE RACEWAY

1/10 scale lighted 450 foot outdoor off-road dirt track. 1/10 scale 115 foot in-door high banked dirt oval with jumps. Outdoor racing Friday at 6:30 p.m. Bomber class (6-cell and bag motor, 6:00 min. heats) Saturday 6:30 p.m. oval racing (all classes, 4:00 heats) Sunday 6:30 p.m. off-road (All classes, 4:00 min. heats) A/C power, computer lap count, snack bar & R/C sped shop. 265 South Clay St., Jasper IN, 47546. Call Joe "BJ" Lorey (812) 482-3484.

P & T HOBBIES

1/10 off-road and oval racing on one of the midwest's finest circuits. Full service hobby shop on site and ample pitting with AC power. Oval is 220' long and off-road circuit offers more than 300' of racing. Racing Friday night and Saturday, call for schedule. R.R. #2, Box 450A, Mitchell, IN 47446, (812) 849-6666.

IOWA

BOB'S R/C SUPPLY & RACEWAY

1/10 Scale: Indoor carpet racing! Tues. 1/10 oval; Fri. 1/12 Road Course; Sat. Monster Trucks. Stock & Modified. Call Bob, Nancy or Kevin (319) 232-2235, 935 Sheerer Ave., Waterloo, IA 50701.

NORTH PARK R/C SPEEDWAY

1/10 and 1/12 electric, 1/8 gas and 1/4 scale: For further information write c/o Mike Beisch, 805 South Jerome, Algona, IA 50511 or call (515) 295-9352.

KANSAS

EBERSOLE HOBBY & R/C RACEWAY

1/10 Scale off-road and oval. Races Wed., Thurs., Sat., and alternate Sundays. 11417 W. Highway 54, Wichita, KS 67209. Len Ebersole, (316) 722-8888.

CHAD'S R/C WORLD

1/10 Scale indoor dirt track. Thurs., oval; Fri. truck pulls; Sat. off-road. P. O. Box 76, 305 Browne Avenue, Scranton, KS 66537, (913) 793-2313.

KANSAS R/C RACING CLUB

Every Second Sunday, Junction City; Every 4th Sunday Enterprise.

DEE & MEE HOBBIES

Two tracks; dirt oval and off-road, oval on Mon. and off-road on Fri. Both at 7:00 p.m. Carpet 1/12 on Tue. at 7:00 p.m. 628 Kansas, Topeka KS 66603. 357-4232.

EBERSOLE R/C SUPER SPEEDWAY

High banked asphalt oval, road course, dirt oval and off-road.

Electronic lap counting, track at 11417 W. Hiway 54, Wichita, KS 67209. Phone (316) 722-8888.

RCRC RACEWAY

Outdoor dirt oval and off-road track with full hobby shop, AC power, concessions and lights for night racing. Track is 95 by 65. For more information contact Bob Dunker at (913) 626-3261 day or (913) 626-9681 nights. Track is 507 N. 4th St., Atwood, KS 67730.

KENTUCKY

HOBBY CENTER

Hobby Center, INC. 2106 Triplett St., Owensboro, KY 42303. Phone: (502) 683-7611. Full service facility including hard surface flat track with a straight 75 feet long! Track indoors, regular racing every Thursday at 7:00 p.m. Track open daily for practice. Hours 11:00 a.m. to 7:00 p.m. Mon. - Fri. On Sat 11:00 a.m. to 5:30 p.m.

RIVER CITIES R/C RACEWAY

1/10 Scale: Racing at 5:30 Saturday evenings under a light area. Call Randy Aust (606) 836-4273 or Jason Graham (606) 836-2613. Ashland, KY 41101.

REMOTE CONTROL HOBBIES/RACEWAY

1/10 scale dirt oval and off-road every other Sat. 1/12 scale and 1/10 scale carpet on alternating Saturdays. On site hobby shop. 110 electricity, food. Racing starts at 5:00 p.m. Call Tim or Bev at (502) 247-4715 for more information. Track is in Mayfield, KY (West KY).

LOUISIANA

CAJUN R/C & RACEWAY

1/10th scale off-road dirt track (outdoors) Complete hobby shop, A/C power, food. Races every Sunday at 1:00 p.m. Route 2, Box 288 -Hwy. 343 (Bosco), Church Point, LA 70525. For more info call Ray or Sandy at (318) 873-3855.

CAJUN R/C & RACEWAY #2

1/10th scale dirt oval track (outdoors). Complete hobby shop, AC power. Races every Saturday at 2:30 p.m. Address is 110 A Darbonne, Sulpher, LA 70663. Call Randy or Sandy at (318) 527-9129.

MARYLAND

MASON DIXON R/C CAR CLUB

1/10 Scale: Every Sunday at 1 p.m. Track location at Hagerstown Fairgrounds, Hagerstown, Maryland. Call King's R/C Cars, 219 E. Washington St., Hagerstown, MD 21740, (303) 739-0080.

CENTRAL MARYLAND ELECTRIC

RACING CLUB (CMERC)

Community R/C Speedway

1/10 Scale: Racing every Saturday dirt oval. Middletown Park, Middletown, Maryland. Contact John Mauchamer, (301) 698-9545. 1/12 Scale: Mark Coats (301) 694-7420.

TEAM R & R, INC.

1/10 & 1/12 scale indoor oval carpet racing. Every Sunday. For more info (301) 848-2144 or (301) 876-2983. Westminster, MD 21157.

MARYLAND R/C CLUB

1/10 & 1/12 racing indoor carpet. Toy World R/C, (301) 424-0430.

THE COCKEYSVILLE ASTRODOME

1/10 Scale: C.A.R. Cockeysville Astrodome Racers, Inc., 10854 York Rd., (Rear) Cockeysville, MD, (301) 666-1098. For further information call Art LaPole (301) 889-2070.

GPA HOBBIES, INC.

GPA Speedway races 1/10 off-road and 1/10 and 1/12 indoor road. For schedule information call (301) 805-9004 or write to GPA at 3498 Crain Hwy., (Collington Plaza), Bowie, MD 20715.

THE TRACK/MARYLAND R/C CLUB

1/10 & 1/12 carpet indoor banked oval and road course. Track at 16806-08 Oakmont Ave., Gaithersburg, MD 20877. (301) 417-9630 or 424-0430.

BEL AIR R/C RACEWAY

Mon. Monster trucks and off-road cars starting at 5:30 'til 9:00 p.m. Tuesday practice night fromn 5:30 - 9:00 p.m.. Friday NASCAR & GTP on road racing. Saturday novice races from 10:00 to 3:00 p.m. Track at 227 G Gateway Dr., Bel Air, MD 21014. For information phone (410) 838-1229 or 836-5087.

MASSACHUSETTS

BROCKTON INTERNATIONAL SPEEDWAY

1/10 & 1/12 Oval racing on Mon. 7:30 p.m. 1217 Main St., Brockton, MA. For information call (508) 588-9355.

R/C PERFORMANCE CENTER

1/10 Scale carpet oval and indoor off-road dirt track. Racing Tues., Thurs., Sat., & Sun. 4 Manley Street, West Bridgewater, MA 02379. Ask for John (508) 588-9666.

HOBBIES ETC. RACEWAY

1/10 & 1/12 scale: Every Sunday Racing at 1 p.m. Indoor on-road carpet. For more information call (617) 389-3331. Medford High School, Winthrop St., Medford, MA.

NORTH EAST AUTO RACERS (NEAR)

The club hosts 1/8 gas and 1/10 electric road racing. Track is behind Cobblestone's Restaurant. Races are scheduled May through October. For full schedule contact George at (508) 346-8456.

MEGADROME RAEWAY/BRCCR CLUB

One of the largest facilities on the East Coast. Racing for 1/10 electric and nitro on, off-road and clay oval tracks. Track is located at North Adams Plaza, Rt. 8 Curran Hwy., North Adams, MA 01247 For race and practice information call Gordon at (413) 663-9593, Richard (413) 445-4777 or Warren (413) 442-2566.

WEST STREET HOBBIES RACEWAY

1/10, 260 ft. banked carpet oval. Racing Wed. & Sat. at 7 p.m. (508) 533-1231. 114C Main St., Medway MA 02053. NORRCA rules.

MICHIGAN

USA RACEWAYS

1/10 & 1/12 Scale: Road racing Wed. and Sat. 1/10 oval Friday and Sunday. Stadium 1/10 on Saturday. 6083 Dixie Highway, Bridgeport, MI, (517) 777-7USA.

HARRISON INTERNATIONAL SPEEDWAY

1/10 Scale: Friday night high banked small oval. Sunday large flat oval. 3519 N. Clare Avenue, Harrison, MI 48625, (517) 539-7959.

GLASS CITY RADIO CONTROL

Racing 1/10 & 1/12 scale: Clayton White (1/12) (419) 882-2518 or Mike Marshall (1/10) (313) 241-5321.

BAJA BAYOO R/C RACEWAY

1/10 scale off-road racing May through September. Racing every Sunday at 1:00 p.m. weather permitting. 5313 West 22 Mile Rd., Tustin MI. Track is 8 miles south of Cadillac. (616) 829-3447.

R & L HOBBIES

Indoor dirt stadium track. Race at 1 p.m. Sat., 7 p.m. Wed. Practice other days. First class facility, come see us at 9782 Portage Rd., Kalamazoo, MI 49002. Call us at (616) 323-3686 or fax us at (616) 329-1744.

MISSISSIPPI

FASTRACKERS RACEWAY

1/10 scale off-road racing every weekend. One of the biggest and most challenging off-road tracks in Region 6 ROAR sanctioned. For more information and racing schedule, write - 4909 West Gate Hills Dr., Meridian, MS 39305 - (601) 693-8368.

JACKSON R/C RACING ASSOCIATION

Car and truck racing Sundays at 10:30 a.m. and Tuesdays at 6:00 p.m. Computerized lap counting, all classes pan stock and modified, gearbos stock and modified, truck, 4 X 4, Dominator class, and 1/12 if enough to run. Track is 2 1/2 miles west of Rt. 9 on Rt. 526.

(908) 905-1593.

CROSS ROADS RACEWAY

1/10th off-road racing every weekend. Dirt banked oval and a road course in the center of the track. Come and race those modified motors on the Big Oval. For more information call (601) 287-7169. Chief Electronics/Radio Shack, Corinth, MS 38834.

MISSOURI

HOBBIES 'N STUFF RACEWAY

Off-road racing for 1/10 scale electric trucks and buggies every Saturday and Sunday afternoon at 2:00 p.m. Our 280 foot outdoor dirt track is ROAR legal with 10 foot lanes and computer scoring by Victory Lane II. A fully stocked hobby store is on location. Come see us at: 102 West Pearce Blvd., Wentzville, MO 63385. Phone (314) 327-6006 for more details.

NEBASKA

OMAHA NEBRASKA RADIO OPERATED AUTO DRIVERS

1/10 & 1/12 Scale carpet and pavement racing. Oval and road course. (402) 331-2907.

OVER THE WALL GANG

Schedule: Nov.-Mar. 1/10th oval, 1/10th & 1/12th road course. Apr.-Oct. outdoor off-road and asphalt oval and road for 1/10th and 1/12th cars. On site hobby shop. Located at 401 Market Pl., Norfolk, NE 68701. Phone (402) 379-0879.

HOBBYTOWN USA

1/10 scale, 1/3 mile high banked dirt oval. Racing Tues. at 7 p.m. and Sun. at 1:30 p.m. May through October. Located in the East Park Mall; 66 & 9 streets, Lincoln, NE 68510. (402) 434-5056.

NEVADA

AMS R/C RACEWAY

Racing is 1/10th off-road Wed. nights at 7 p.m. & Sun. at 10 a.m. Track has a clay surface. On Sat. 1/10 oval/on-road racing on carpet at 7 p.m. This is an indoor track (110 x 44 clay off-road and 110 x 40 carpet track) and we have a hobby shop and snack bar. We are also only 2 miles away from the casinos and hotels. Open daily from 12-9 p.m., closed Monday. Track is at 1130 Icehouse, Sparks, NV 89431. For more information call (702) 355-8803.

NEW HAMPSHIRE

HOBBIES PLUS & R/C RACEWAY

Track is at 14 Celina Ave., Hashua, NH 03063. This is New England's largest (350 ft.) and fastest banked carpet oval. Also 26 x 72 flat carpet track dedicated to 1/12 road racing. Pit areas with electricity for over 200. Complete hobby shop, computer scoring. For more information call (603) 882-9200.

ACTION R/C RACEWAY

1/10 Scale & 1/12 on-road, 1/10 off-road cars and trucks. Indoor carpet high banked oval. Family Fun Hobbies, 201 Washington St., Claremont, NH. (603) 543-1022.

HOBBY ETC. RACEWAY

Indoor carpet banked oval for 1/10 and 1/12 scale. The 1/12 division also can road race. AMB scoring with a full hobby shop and concessions on the site. Telephone is (603) 595-8549. Rt. 101A, Amherst, NH 03031.

NEW JERSEY

AMERICAN HOBBIES

1/10: Thurs. Oval; Sun. Off-Road & Oval. Call (201) 446-2010.

PARLOR HOBBIES

1/10 & 1/12 Scale: Short track stock car racing on road courses. 1/10 on asphalt. Truck class with 1/12 on road, off-road. Rabbit

Lane & 34 Broad St., Matawan, NJ, 566-3158.

KIM'S R/C PIT STOP

I.E.D.A. drag racing - 10 classes including bracket. Racing every Sunday on an outdoor asphalt track. We also have a X-Mas tree, and computer scoring and printout. Call for latest schedule at (201) 942-5955. We are located at 357A Union Blvd. Totowa, NJ.

AL & RICH'S R/C SPEEDWAY

Indoor carpet road course and 1/10 dragstrip. AMB system 20 and Dragmaster Timing System. Racing Friday, Saturday and Sunday with open practice on Thursday. Track is at 90 N. White Horse Pike, Hammonton, NJ 08037 (located at Texaco Station). For more information call (609) 561-7584.

NEW MEXICO

LAS CRUCES HOBBY RACEWAY

1/10 scale off-road and oval on a 7,200 square foot track. 1/10 gas truck and electric racing every Sunday. 1996-A S. Valley Dr. Las Cruces, NM 88001. Phone (505) 524-8530

RACER'S INN

Full hobby shop and concessions. 1/10 off-road every Sat. at 6:00 p.m. on outdoor 70x120 track. Also 1/4 scale Sprints and Grand Nationals. Oval and dirt oval. Call for schedule. Located at 4300 Rankin LN. N.E., Albuquerque, NM 87107. Phone (505) 345-5988.

NEW YORK

WALT'S HOBBY & CRAFT

1/10 & 1/12 Scale: Two indoor tracks. 1/10 clay oval, Mon. & Sat; 1/10 Gearbox carpet, Mon.; 1/12 & 1/10 carpet, Tues. Oval and Road Course. Weight Pulling Wednesday. 2 Dwight Park Drive, Syracuse, NY, (315) 453-2291.

REC. R/C RACEWAY

1/10 Scale Clay Oval. Saturday - Oval; Sunday Off-Road. Call Erin Clancy (914) 868-7715. Route 82 to Standfordville, NY 12581.

ROMAC

1/10 and 1/12 on large carpet oval. Thursday and Sunday. (Northern Lights Mall) N. Syracuse, NY. For more info call (315) 468-1463 or (315) 468-6544.

SCHENECTADY R/C SPEEDWAY

1/10 & 1/12 Scale: Indoor oval carpet and Monster Trucks. 955 State St. Schenectady, NY, (518) 3709-3747.

BROWNIE'S HOBBIES

1/10 Scale: Off-Road Dirt Track. Friday evenings 4WD & 2WD. Track open April - November. 124 Bennett St., Staten Island, NY 10302, (718) 727-2194.

RAPID TRANSIT RACEWAY

1/10 Scale: Mon, Tues., & Sat. - Practice. Wednesday - Stock & Mod.; Thursday Sprint Car; Friday Sportsman & Open Class. 2104 Broadway, Schenectady, NY 12306, (518) 372-0777.

CAPITOL DISTRICT R/C OUTLAWS

1/12 Scale 4-cell carpet. Oval and road course. Every Friday at 7:30 p.m. October to April. For further info contact Capitol District R/C Outlaws, 223 Fourth St., Scotia, NY 12302, or Sam Roberts (518) 374-3801.

QUEENS OFF-ROADERS

One of the biggest 1/10th off-road tracks in the country! Racing on Fri. at 8:00 p.m., Sat. at 3:00 p.m. and Sun. at 11:00 a.m. For latest information call (718) 392-5766. 42-12 13th St., L.I.C., NY 11101.

VICTOR R/C ASSOCIATION

1/10 scale clay oval track & off-road racing. Fridays and Sundays, May through September. 1309 Mertensia Rd., Farmington, NY For information call Larry at (716) 394-3754.

NORTH CAROLINA

DIXIE R/C HOBBY SHOP

1/10th Scale: Every weekend Sat. & Sun. The races will alternate

between oval and motorcross starting in May. P. O. Box 135, Ramseur, NC 27316, after 6 p.m. (919) 824-2770.

MID-CAROLINA R/C SUPER SPEEDWAY

1/10 & 1/12 high speed banked quad-oval and road course. Located on Flint Hill Rd., Off 1-77/Carowinds exit, So. of Charlotte, NC. Fred Penland, (704) 373-2535 7:30 A.M. to 4:30 P.M.

ASHEVILLE HOBBY SPEEDWAY

1/10 & 1/12 scale asphalt oval-indoors. Racing Wed. & Sat. 7:30 p.m. Highway 25, Naples, NC 28760, (704) 684-9814 ask for Jack or Sharon Murdock. 1/10 Dirt Oval & Off-Road. Racing Sat. & Sun. 1st & 3rd weekends. 6200 McGregor Dr., Charlotte, NC 28227, (704) 545-0746 ask for Steve Hill.

RC HOBBY & RACEWAY

1/10 & 1/12 indoor carpet racing Nov.-Mar. Oval and Off-Road dirt racing every Saturday. For more info (919) 228-6809, 1358 S. Church Street, Burlington, NC 27215.

BOOGLE BAY R/C RACEWAY

600 foot asphalt oval raceway with 30 foot wide straits and 40 foot wide turns. The track races 1/10th, 1/12th and 1/4 scale. Racing set every month in advance every Saturday and Sunday. Rt. 1 Box 324, Linden NC, 28356 - (919) 488-5408.

NORTH DAKOTA

NORTHERN MINI-RACERS

1/10 Scale on-road, carpet, road racing. Saturdays Sept. through May. P. O. Box 415, Minot, North Dakota. For information call Pat McWethy (701) 839-8868 or (701) 852-6254. Roger Lee (701) 839-4731 or (701) 839-5294.

KOUNTRY KLIN HOBBY

1/12 Scale small indoor carpet track & hobby store. Box 247, 324 Railroad Ave., N. Mohall, ND 58761, (701) 756-6307.

OHIO

TARCAR-TOLEDO AREA

1/8 gas stock cars. Black clay tri-oval. Sundays late April thru Mid-October. For more info call Dave Scanes, (419) 893-1916.

1/8 RACERS OF TOLEDO

1/8 & 1/10 scale asphalt road course. Every other Sunday from Mid-April to Mid-October at the Woodville Mall rear lot. For schedule and info contact Brent Gottfried (419) 843-3231.

THE RACER'S CHOICE - RADIO CONTROL HOBBIES

Located at 1298 U.S. Rt. 42, Mason OH 45040. Large outdoor off-road track, over 400' long with 100' straight, elevation changes, jumps, moguls and banks. Lighted with large driver's stand. Also banked 40' - 100' oval. Organized racing weekly. Fully stocked shop, for details and schedule call Holly, Tony or Adrian at (513) 398-5539. Track located just north of Cincinnati, near Kings Island.

CORCAR - COLUMBUS, OH

Outdoor 10th scale off-road racing May through September and indoor off-road racing October through April. Contact Ray Williams before 9 p.m. (eastern) (614) 890-2983.

ALCAR INTER. R/C RACEWAY

1/10 Scale off-road Friday nights. 1/12 & 1/10 carpet Sundays. 33501-A Lake Rd., Avon Lake, OH 44012, (216) 933-6017.

ALTERNATIVE RACING ASSOCIATION

1/10 and 1/12 on-road. Two large tracks indoors and outdoors. 2600 17th SE, Canton, OH 47306 (216) 484-2587.

INNOVATIVE HOBBIES & LAKES SPEEDWAY

Large indoor multi-layout ozite carpet track and large outdoor dirt oval. Racing Wed., Sat., Sun. 3425 Manchester Rd., Akron, OH 44319, (216) 645-1333.

AEROTECH RACEWAY

1/10 oval/tri-oval and off-road dirt. 409 Applegrove Rd. North Canton, OH. Call Ron at (216) 499-1300.

MODELER'S HAVEN RACEWAY

1/10 clay oval May thru October. Electricity, water, indoor restrooms and shaded pit area. Contact Bob at (216) 499-6000. 4255 Portage N.W. North Canton, OH 44720.

MID OHIO R/C RACEWAY

We race 1/10 off-road and dirt oval all indoors. There is a 300 foot

oval track with the off-road track built inside of that. In addition to that, we have scale 1/4 mile slot car drag races. Call Bob at (513) 233-2807 for more information. Track is in Huber Heights, Ohio.

D & S HOBBIES AND RACEWAY

Racing 1/10 & 1/12 4-cell. Race days are Wed., Fri. and Sun. Closed Mondays. D & S Hobbies, 7701 Crile Rd. #3, Concord, OH 44077.

AAACTION SPEEDWAY

High banked 100' x 50' clay oval and off-road track. No AC power, but plenty of shaded parking and pit space, clean restrooms, concession stand and a good family atmosphere. Contact Tim McKnight at (614) 387-5912 for more info. All races \$5.00 per class.

OKLAHOMA

R.C.A.R. OF TULSA

1/10, 1/12 Scale: Indoor racing. 3025 South Sheridan Rd., Tulsa, OK. For more info call Dave Cole (918) 745-9898.

RCRC OF OKLAHOMA

1/10th scale indoor dirt oval and dirt off-road. Racing on this large track is at 7 p.m. Tuesdays and 5 p.m. Saturdays. Complete hobby shop with plenty of pit space and AC power. 400 S. Vermont, #104, Oklahoma, OK 73108. Call (405) 947-RACE ask for Steve or Rick.

OREGON

R/C SPEED CENTER R/C ADDICTION

1/10 & 1/12 scale, banked dirt oval racing, dirt off-road racing, sled pulls, mudbog. 2810 N. Pacific Hwy., Medford, OR 97501, Call Gene or Betty Skelton, (503) 779-8298.

PENNSYLVANIA

CARCLUB-COCHRANTON AREA

Racing every Friday at 6 p.m.; Saturdays 9 a.m.; Sundays at noon. Large indoor carpet-dirt outdoor. Call for info Harry Turner, 120 W. Adams St., Cochranton, PA 16314. (814) 524-7788.

C.A.R. CLUB

Racing every Sunday. Tamarack Raceways, Contact Harry Turner, 120 W. Adams St., Cochranton, PA 16314, (814) 524-7788.

WAGONHILL HOBBIES

Indoor 1/10 & 1/12 road racing every Fri. night. Off-road every Sat. night. 225 S. Board St., Grove City, PA (412) 458-4711.

TC'S R/C'S

Inside and outside race track and RC Shop. 1537 Freeport Rd., Natrona Heights, PA 15065, Call 226-8802.

PHILLY RADIO CONTROLLED RACERS R/C CAR CLUB

1/10 on-road paved track. Sundays, April thru November 11 a.m. 7790 Dungan Rd., N.E. Philadelphia. Jon (215) 224-4822 or Bernie (215) 831-1835.

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Over 4,000 Sq. foot carpet track. Computerized lap counting. Racing starts at 7 p.m. each night. Friday oval racing; Saturday stadium off-road. Located at 747 E. Railroad Ave., Verona, PA 15147 - (412) 826-0602.

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BNS COMPETITION HOBBIES

Contact Bob Sanford, (803) 224-8591. Route 7, Box 380, Anderson, SC 29624. Racing and open practice Wed. 6:30 p.m. Every Saturday 1 p.m. 1/10 Dirt Oval.

REMOTE HOBBIES INDOOR RACING

Fri. nites - Oval 1/10; Sat. - Road Course 1/10. Shop (803) 736-9446, Track (803) 699-0528. 9005 C Two Notch Rd., Columbia, SC 29223.

BERRA R/C SPEEDWAY

Fri. Nights 1/10 conc., banked oval; Sat. nights stadium off-road for trucks and buggies; Sunday unlimited oval; 707 Sulpher Springs Rd., Greenville, SC 29610. (803) 246-4702.

VIRGINIA

TENNESSEE

HITT'S HOBBY & RACEWAY

Tuesday Oval; Thursday Off-Road Stock; Saturdays Off-Road Novice; Sundays Off-Road Modified; Oval and Off-Road. 853 Wren Rd., Goodlettsville, TN 37072. Ben or Kent (615) 859-3465.

TEXAS

HAL'S R/C RACEWAY

Sat. is on-road asphalt 1/10. Sun. is off-road. Registration both days is at 11:00 a.m. 1440 Bessemer, El Paso, TX 79936 (915) 591-2213.

RIVER CITY RACEWAY

On Quincy Road, Wichita Falls, TX. Every 2nd & 4th Sundays at Noon. Call (817) 691-1478.

ARROW HOBBIES

Wed. - 1/10; Every other Friday 1/8 Sprint cars only; Saturdays 1/10 dirt oval. 2710 So. 1-35 West, Burleson, TX, (817) 295-2821.

VICTORIA HOBBY SHOP

Every Sat. Off-Road; Every Sunday - Ovals. 5211 John Stockbauer, Victoria, TX 77904, (512) 575-3270.

EAGLE HOBBY CENTER & RACEWAY

Every Friday night 1/12 4 cell stock, pro-stock and modified. 1/10 6 cell stock on-road. Eagle Hobby Center & Raceway, 3601 Shepherd, Balch Springs, TX 75180, (214) 557-5290.

COASTAL BEND SANDBLASTERS R/C CAR CLUB

Races first thru third Sundays, 2 p.m. start. Bill Witt Park, Yorktown Road, Corpus Christi, TX. Call Pete (512) 992-4448.

TEXAS R/C RACEWAY (Home of the Plano Outlaws)

Tues. & Sat. - 1/10 on-road; Fri. - NASCAR nite; Sun. 1/12 road. 75 Central Expressway at 15th St., Exit 29, Palisades Square Shopping Center, Plano, TX. Call Jim (214) 517-7485 or Dean (214) 519-0324.

AMERICAN ANGLER TACKLE & R/C HOBBY CENTER'S "AA" RACEWAY

Two dirt tracks, oval & off-road. Races every Sunday, 1 p.m. Tracks alternated. Races every Saturday 11 a.m. oval. Hobby shop on site. 1617 Toomey Rd., Austin, TX 78704, (512) 474-8277.

WESTSIDE HOBBIES

1/10 Racing every Sat. 1/10 on-road racing every Sun. on asphalt. Alternating oval and road course. 7214-A N. Mesa, El Paso, TX 79912. Call Tom, Mark or Tim at (915) 585-1864.

FINISH LINE HOBBY & RACEWAY

1/10 scale indoor off-road every Fri. and Sat. 8:00 p.m. 1/12 indoor carpet every Tue. 7:00 p.m. 11925 Jones Maltsberger, San Antonio, TX 78216. Call (512) 491-0088 for more information.

T & T EAGLE HOBBY

Headquarters for the "Killer Dillers" R/C Club, racing is on the first and third Sunday in front of the store. The first Sunday is road course and the third is oval. Emphasis is on fun racing. Trophies for novice class only, entry \$5.

HURRICANE SPEEDWAY

Racing Wed., Fri., Sat., Sun., alternating off-road and oval. Track is at 9600B Old Katy Rd., Houston, TX 77055. (713) 464-8020.

UTAH

I.R.C.D.R.A./HOBBY EXPRESS

Race indoor off-road every Saturday at 6 p.m. 3150 Brinker, Ogden, UT info call Hobby Express (801) 621-4013.

WASATCH OFF-ROAD RACEWAY

Operated by IRCRA. Races are indoor on an off-road and oval raceway. Races every Saturday at 6:00 p.m. Track at 3170 Brinker Ave., Ogden, UT 84401. Phone is (801) 773-0933.

VERMONT

MIKES HOBBIES & RACEWAY

Indoor banked 1/10 carpeted oval, on-road racing. Six classes every Wed. at 7:00 p.m. and Sun. at 1:00 p.m. Track at 162 N. Main St., Rutland, VT 05701 - (802) 775-0059. Ask for Lee or Chuck.

F/X CITY RACEWAY

Every Saturday 1 p.m. The Frame Gallery, 13340 F Franklyn Farm Road, Herndon, VA 22071. For info call Eric (703) 471-4499.

WINNERS CIRCLE HOBBY SHOP & RACEWAY

Racing every Saturday night at 6 p.m. Large oval carpet. 3236 W. Clay St., Richmond, VA 23230 (804) 355-7076.

COOPER'S RC RACE CENTER

Racing every Sunday 2 p.m. oval and off-road. Contact Norris (804) 724-4182. Rt. 4, Box 122B, Chatham, VA 24531.

FAIRSTONE R/C SPEEDWAY

Dirt 1/10 scale 1/4 mile oval & figure eight racing every Wed. and Sun. eves. through Holloween. Hobby shop, concession stand. Rt. 4 Box 918, State Rd. 635, Stuart, VA 24171. Phone (703) 930-3984.

WASHINGTON

SPOKANE INDOOR RACEWAY

This is a 10,000 sq. ft. facility with carpeted on-road track and indoor dirt off-road track. Daily open practice is \$2 per day. Large indoor pit area, computer scoring (AMB), full parts shop. Located at E. 6422 2nd Ave., Spokane, WA 99212. Phone for current race schedule at (509) 534-RACE.

WEST VIRGINIA

BIG BOYS TOYS HOBBY SHOP AND TRACKS

Dirt and carpet oval tracks. Racing every Sunday evenings; Monday and Thursday evenings. Bridgeport, WV, (304) 842-5799.

WEST VIRGINIA REMOTE CONTROL RACEWAY

Racing every Sunday. Doors open at 12 noon, racing starts at 1 p.m. The track size is a 90 X 50 foot carpet oval. Prizes in all "A" mains. Track is at 601 Jefferson Rd., South Charleston, WV 25309. Call Russell Pauley (304) 346-7223 after 6 p.m.

R/C RACE PLACE

Racing on-road every Wed. night at 7:00 p.m. and carpet oval every Fri. night at 7:00 p.m. during the winter months. Racing outside for dirt oval every Wed. Fri. nights on lighted 260 foot track during the summer months. Full hobby shop. Contact Mike or Dennis Robinson at (304) 292-0811 for information.

WISCONSIN

MADISON AREA R/C CAR ASSOCIATION, INC.

Dirt Oval on Sunday. Carpet road racing on Saturday. Carpet oval on 1st and 3rd Fridays. Track is at 1810 S. Park St., Madison, WI. For information call 273-0519 or 837-2033

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TRACKSIDE RACEWAY

Dirt oval Thur. night 6 p.m. Menomonee Falls, WI (414) 255-2040.

ABC R/C

Clay track racing every Sat. 1 p.m. Truck pulls every Tuesday 6:30 p.m. 1441 B E. Main Street, Waukesha, WI 53186, (414) 542-1245.

ALL IN 1 RACEWAY

5612 S. 108th St., Hales Corners, WI. 1/10 scale indoor dirt track. High speed semi-oval and true off-road courses. Racing Wednesday nights at 6 p.m. Sat. & Sun. at 1 p.m. For more info call (414) 425-4060.

RC RACEWAYS AND HOBBIES

1/10 Indoor dirt oval Fridays & Sundays. Off-Road Wednesdays. Outdoor Asphalt Thursday (weather permitting). Fully stocked hobby shop. For more info (414) 764-9701. 181 W. Marquette Avenue, Oak Creek, WI 53154.

GARY'S HOBBY SHOP

Indoor banked concrete oval racing Tue. nights. Figure "8" Sun. afternoon. On site hobby shop with AC & DC power. For latest information call (414) 554-8884 or (414) 554-8636. Address is 3701 Durand Ave., Elmwood Plaza, Racine, WI 53405.

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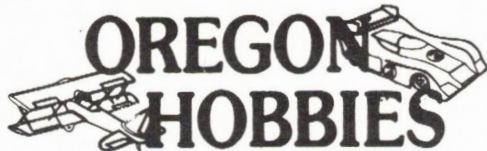
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For The Racer

TEKIN RAISES THE GOLD STANDARD

Tekin Electronics announces a new, updated 411G GoldFet Speed Control for 1993.

The High Frequency Tekin 411G GoldFet is one of the most popular speed controls among top-level racers. It features the lowest voltage drop in the R/C Industry at just .0015v. And its braking system utilizes a more powerful single GoldFet to do the job of two heavier, less powerful FETs.

For 1993, Tekin has raised the Gold standard. This year the 411G features a built-in external dial on the Torque Control for easy adjustment. And this is in addition to Tekin's patented test point for super-exact Torque Control calibration.

The updated 1993 model also features a doubling of the BEC output current for greater reliability. This also makes it easier to use those new ultra-quick servos. The 411G's built-in Schottky diode (no external diode needs to be soldered to the motor) has also had its load capacity doubled to further enhance the speed control's famed Tekin reliability. And, finally, the new 411G sports new, ultra-thick, multi-strand, 12 gauge wire for even less voltage drop, more horsepower and greater efficiency.

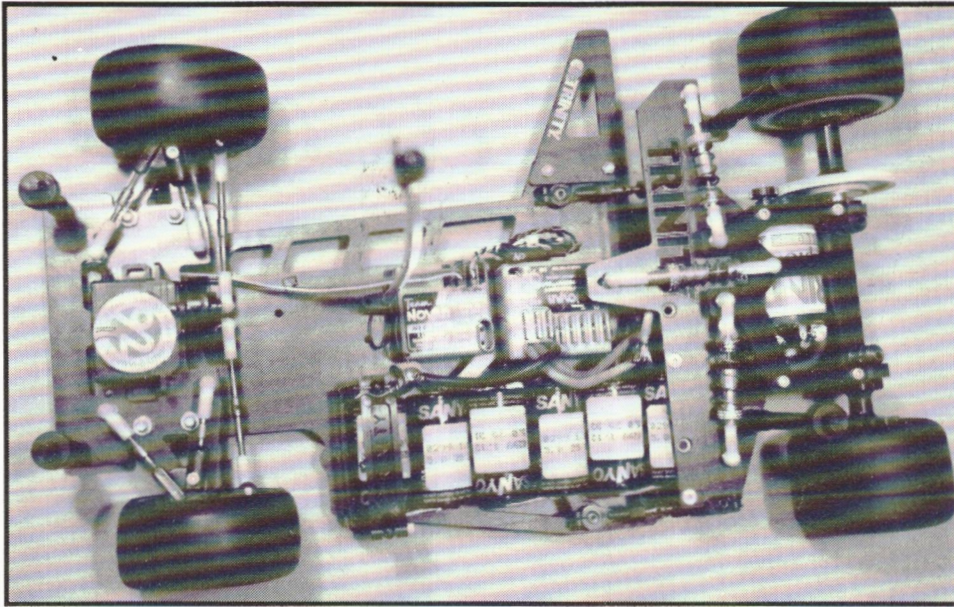
No manufacturer has more years of experience with super-efficient GoldFets than Tekin. And with all these improvements for 1993, the high-frequency Tekin 411G Speed Control has raised the Gold standard to new heights. Tekin Electronics, 970 Negocio, San Clemente, CA 92672, (714) 498-9518

MIP CHANGE BOX KIT FOR ASSOCIATED RC-10 & 10T

MIP's new change box for the Associated RC-10 and 10T gives a new option in gear ratios. Convert the

Stealth Tranny into a 2.61 ratio gear box by using MIP's Change Box Kit. A 2.61 ratio tranny has smoother acceleration with less tire spin, and smoother deceleration with greater stability and steering. It allows for longer run-time with cooler motors. Designed with the trucks in mind the MIP Change Box Kit also works well for stock and modified buggies. Kit comes with MIP Tranny Case, diff and idler change gears. #AS-1000 Change Box Kit - \$17.95. MIP, 746 E. Edna Place, Covina, CA 91723.





NEW EVOLUTION 10 SUPER SPEEDWAY

Trinity Products is proud to officially announce the latest edition to their famous line of 1/10th scale cars. The Evolution 10ss is the super speedway version of the IFMAR World Championship winning EV10.

Based on Joel Johnson's winning on-road car, the EV10ss has incorporated all its unique features into the most advanced super speedway car on the market today. In its first outing at the Cam sponsored K&N Winter Blast, where 384 entries showed up, Joel Johnson was top qualifier

and won the A main by a lap. Four other EV10ss made the A finishing third, fourth and fifth. Not bad for a brand new car design that had only turned a wheel two days before. \$369.99. Trinity Products, 1901 E. Linden Ave., #8, Linden, NJ 07036, (908) 862-1705.

MODEL RECTIFIER CORPORATION

MRC's World Scale trucks and buggies have proven to be unmatched on the track or in the backyard. Could there be a better way to get started in World Scale? Yes, MRC has introduced a Ready-To-Run packaged version of the Thunder King Truck. It's a sure-fire way to get started and to stay in the sport of R/C off-road.

Unlike other R-T-R trucks or buggies, the Thunder King R-T-R is exactly the same vehicle that comes out of the kit version. It's not downsized or made like a "toy" version; it's the real article! That means that out of the box, you get an off-road truck that has exceeded all expectations for strength and performance. You get two electric motors driving the Power Command transmission equipped with seven ball bearings, an adjustable slipper clutch, and an adjustable ball differential. Oil-filled adjustable coil-over shocks, massive A-arms in a four wheel independent suspension and thick 1/8" fiberglass shock towers make up the suspension system. You just can't get this many racing truck features in any other R-T-R!

The two channel two servo R/C system is pre-installed, so there's very little prep work needed to operate the chassis. Once again, a hobby grade radio such as the Futaba 2PB system is used; not a toy grade radio as in other R-T-R's. The same high quality clear Thunder King body and attractive decals are included in the package so that you can paint and personalize the body to your liking. Add batteries and get going with the Thunder King R-T-R; it's the Ready-To-Run that simply stands above the rest!

The Thunder King R-T-R is available through World Scale dealers as stock number RX106 for a 75 MHz installed system and as the RX106A for a 27 MHz installed system.

Call MRC at 908-248-0400 to find the World Scale dealer nearest you.



NOW IS THE PERFECT TIME TO JOIN GAS RACING; THE SANDMASTER 10

After creating today's #1 R/C gas racing buggy, the Inferno 4WD, Kyosho turned its attention to making high-performance nitro action simple and affordable for first-time modelers. The result: Kyosho's 95 percent preassembled 1/10 scale Sandmaster 10 2WD.

The Sandmaster lets modelers experience the high speeds, roaring engine, and nearly unlimited run times of gas power with their very first car. It's uniquely equipped with uncomplicated, race-proven engineering...providing an easy entry into powerful gas modeling without compromising performance potential.

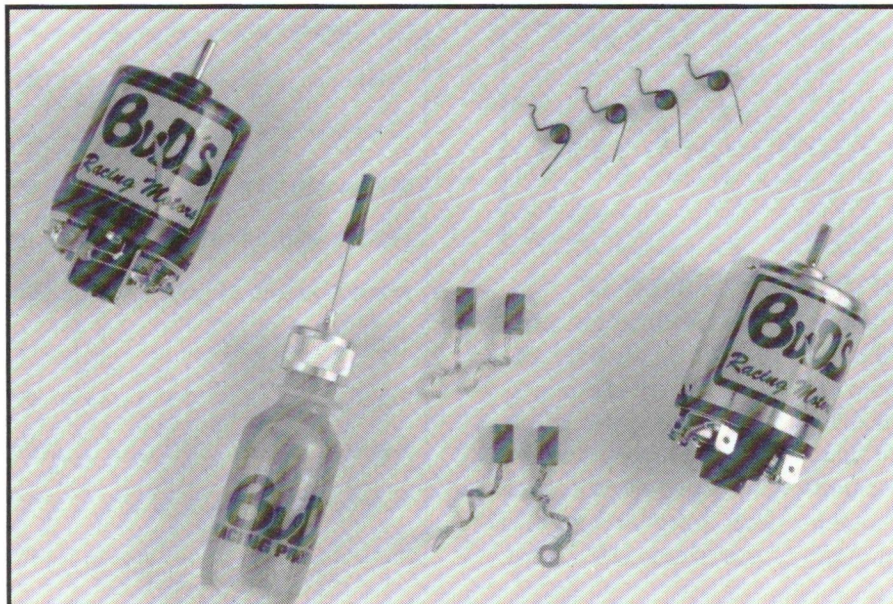
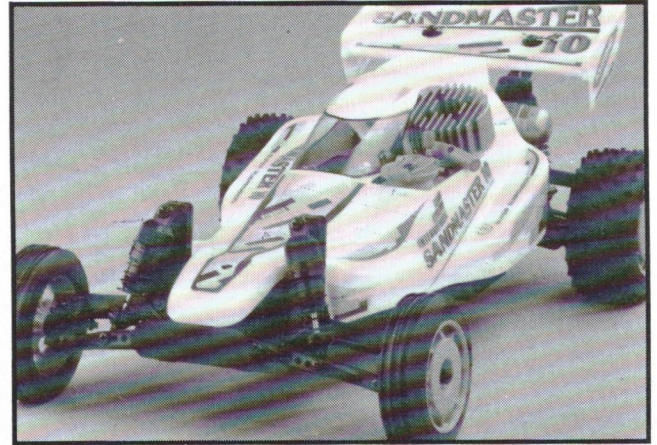
This buggy's included O.S. .10 FP-B engine comes equipped with Kyosho's newly designed, heavy-duty recoil starting system—which helps modelers save on accessory costs by eliminating the need for an electric starter. The engine is preinstalled in the Sandmaster's strong, lightweight Kelon chassis, designed for easy equipment access and maintenance.

Front to rear, the Sandmaster's rugged construction meets the strength demands of entry-level gas racing perfectly. Its oil-filled shocks and 4 wheel independent double wishbone suspension system softens the jolts of rough off-road terrain. Bellcrank steering simplifies servo installation and produces excellent steering response. The three-gear transmission (with planetary gear-type differential) and brake system are heavy-duty and consistently dependable.

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Kyosho's Sandmaster is designed to accept many Ultima series hop-up parts, giving new racers the opportunity to maximize its performance as their skills and budgets allow. It's the perfect nitro initiation...requiring little assembly, little maintenance, and no R/C experience!

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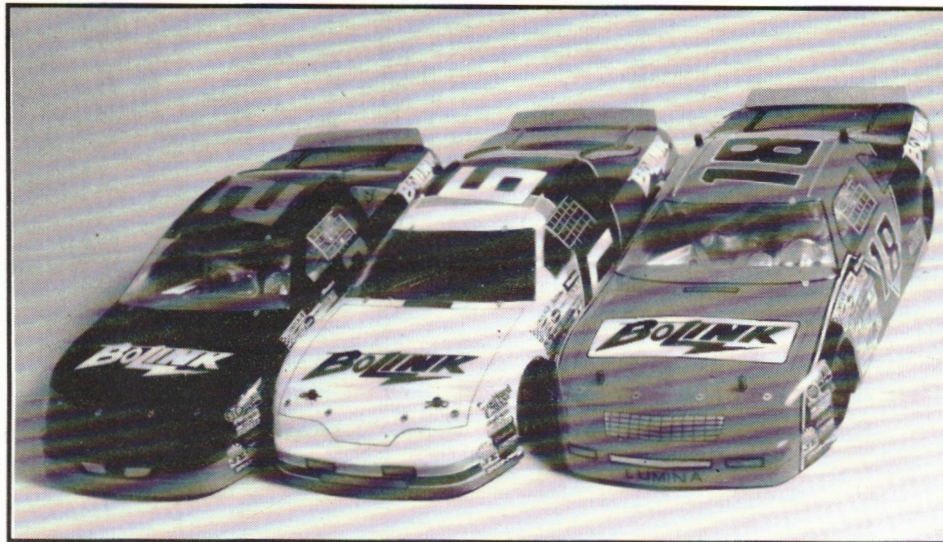
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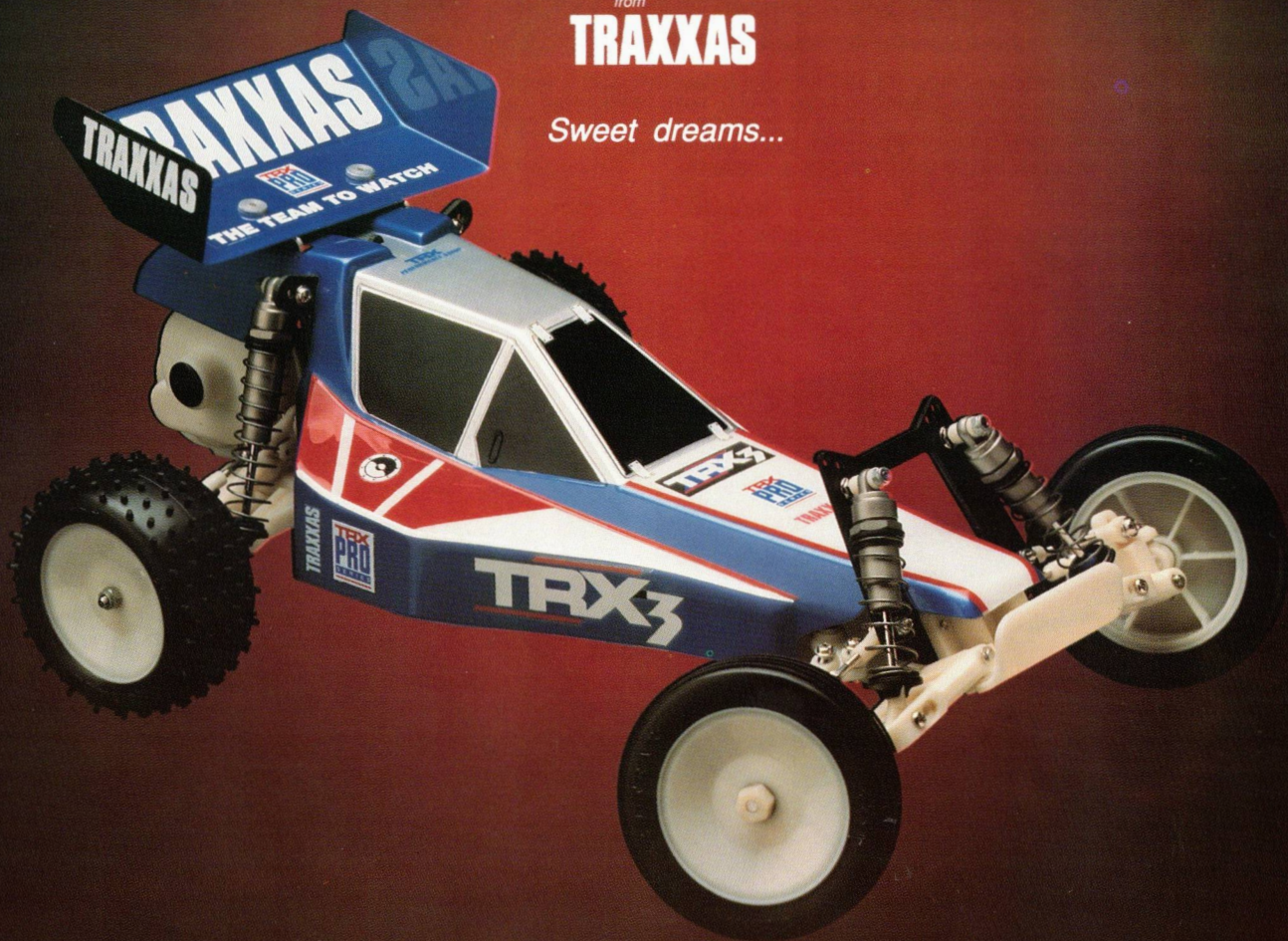
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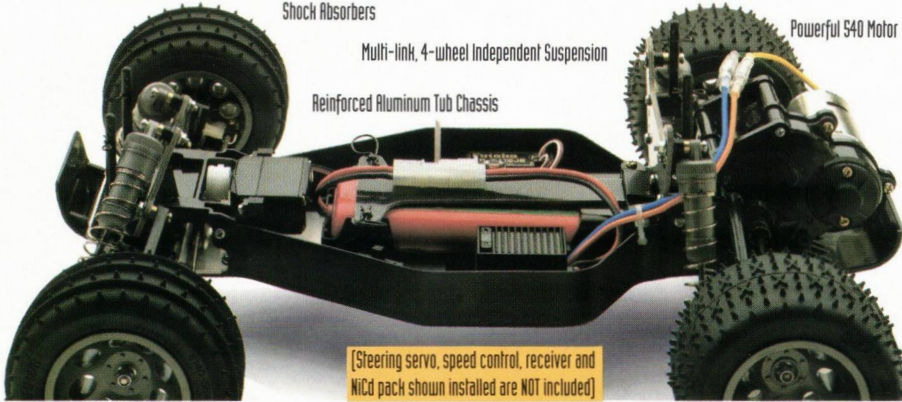
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